Haaga-Helia
University of Applied Sciences

# Discovering market potential for virtual reality as a marketing communication tool for B2B clients

Juho Ryynänen

Bachelor's Thesis
Degree Programme in International Business
2017

**Author**
Juho Ryynänen

**Degree programme**
Bachelor of International Business

| **Report/thesis title** | **Number of pages and appendix pages** |
| --- | --- |
| Discovering market potential for virtual reality as a marketing communication tool for B2B clients | **48 + 21** |

This thesis is quantitative research of the market potential for virtual reality as a marketing communication tool targeted at McCann Finland Oy's clientele and other potential clients of different lines of businesses.

Virtual reality has been around since late the 1980's but has taken leaps during the past few years. Virtual reality as a marketing communication tool has not been used considerably much and is likely at a so-called early adopters stage. The research studies virtual reality as an innovation looks into its attributes and examines the characteristics of potential target markets.

The theoretical framework consists of technology adoption, disruptive innovations, and diffusion of innovations. To identify the potential users, the author delved into the characteristics of different technology adopter classes. As virtual reality is disrupted innovation by nature, the most probable users are early adopters. Early adopters are visionaries by their characteristics and have the readiness to take the risk of being first to use the technology to get strategic leverage over the competition.

The research method was primary quantitative research implemented as an online questionnaire and secondary research that consisted of scientific articles, websites, surveys, and books. The results present key findings and conclusions in the thesis.

The study revealed that knowledge of virtual reality was rather comprehensive as more than half of the respondents had personal experiences of it and most knew the concept. Most respondents also saw the potential of virtual reality in marketing and the majority believes in virtual reality as a part of people's everyday lives.

Based on primary research the organizations' technology adoption habits among the respondents were divided mostly between early adopters, visionaries and early majority, pragmatists. Pragmatists are not likely to adopt virtual reality as a marketing communication tool in a first stage due to lack of references. The significant difference between early adopters and early majority is that the latter one is reference driven.

Overall, there is distinct interest in virtual reality as a marketing communication tool. However, not all respondents were ready to engage virtual reality in their marketing efforts, at least not before it has proven efficient. It is recommended to commence virtual reality marketing efforts and establish a reference base for majority markets. It would be recommendable to established efforts with similar clients to gain expertise in the narrow field first, due to a learning curve and possible up-scale after that.

The study also revealed that organizations are interested in more targeted marketing overall.

**Keywords**
Virtual reality, product adoption/ -life cycle, disruptive innovations, early adopters, diffusion of innovations

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# 1 Introduction

The first chapter explains the background of this thesis and shortly introduces the case company. The topic describes, research question with investigative questions are presented in this part as well. The demarcation, international aspect, expected benefits; key concepts are explained in introduction part too.

## 1.1 Background

New technologies such as virtual reality, big data, Internet of things, augmented reality; mixed reality and many others have developed to a point where they can be applied. Often technologies may feel utopist and take the first step or be pioneers may feel intimidating and may be underutilized despite advances in hardware and software capabilities (Venkatesh and Davis 2000, 186). However, many companies are interested in new technologies and would benefit from understanding the potential and possibilities the new technologies reveal. Michael Porter (1985, 63) claims that technology gives a competitive advantage if it has an essential role in designating relative cost position or differentiation. Technological advancements are developing at fast pace and companies must keep up to stay competitive. Smart devices with applications and their accessories bring intriguing possibilities in many fields, such as marketing. Augmented reality and virtual reality survey report (2016) predict that virtual reality and augmented reality are within 10 years tens of billions of dollars. Also, Mark Zuckerberg is planning to spend 3 billion dollars to implement virtual reality in Facebook even though general public has not yet adopted the technology (Fortune 2017). The advertising company, McCann Helsinki Oy as a commissioning company for this thesis seeks to map the potential clients from their current customer base to establish new virtual reality marketing communication tool. The samples are collected from McCann Helsinki Oy's clientele and other potential clients to utilize virtual reality as a marketing communication tool. McCann Helsinki Oy may provide a broader portfolio of services with the new marketing tool. In the best-case scenario, the early adopters may get distinct strategic leverage of being the pioneer in using virtual reality as a marketing communication tool.

## 1.2 Research Question and Investigative questions

Research Question:

**How to identify potential B2B clients to utilize virtual reality as a marketing communication channel?**

Investigative question 1. What is the level of awareness of the clients of virtual reality in general?

The question relates to B2B clients' general knowledge of the virtual reality.

Investigative question 2. What are the challenges in marketing and benefits of virtual reality in marketing?

This part identifies the difficulties the B2B clients are facing in marketing in general and do they see virtual reality beneficial. Disruptive innovation adoption, diffusion of innovations, and innovation lifecycle are the applied theories in this question.

Investigative question 3. Is B2B client ready to utilize the new marketing technology (virtual reality)?

The question includes clients' receptivity towards new technology. This part includes which B2B clients' are most responsive to new technology and their characteristics in technology adoption process. The question may indicate the psychographic group of the respondent. Theories applied to this question are innovation lifecycle, organizational buying behavior and diffusion of innovations.

Investigative question 4. Recommendations based on results and analysis.

As the investigative questions are leading to answer the final research question, the recommendations of the author by analyzing the results of theoretical research are final steps to reach the conclusions. The recommendations include what the commissioning company should focus on next. The study should reveal the market potential for virtual reality as marketing communication tool.

Table 1 below presents the theoretical framework, research methods and results chapters for each investigative question.

Table 1. Overlay matrix

| Investigative question | Theoretical Framework* | Research Methods | Results (chapter) |
|---|---|---|---|
| IQ 1. What is the level of **awareness** of the clients before the introduction? | - Innovation lifecycle | Quantitative | 4.2 |
| IQ 2. What are the **challenges** in marketing and **benefits** of virtual reality in marketing? | - Innovation life cycle and disruptive innovation adoption theories | Quantitative | 4.3 |
| IQ 3. Is B2B client **ready** to utilize the new marketing technology? | - Disruptive innovation adoption and innovation lifecycle | Quantitative | 4.4 |
| IQ 4. **Recommendations** based on results and analysis. | | Qualitative | |

### 1.3 Case company

McCann is one of the biggest advertising companies in the world (Ad Age, 2017). The world's first advertising trademark "Truth Well Told" was registered by McCann in 1912 (McCann 2017). During 100 years the McCann has made some of the world's greatest brands most renowned (McCann 2017). McCann Helsinki Oy is part of the Scandinavian group (Finland, Sweden, Norway & Denmark). McCann has won several advertising prizes and has tens of different sized clients. McCann Helsinki Oy was founded in 2015. McCann's core belief is – Creativity is the only way to survive. McCann's vision is to help brands play a meaningful role in people's lives. The company uses its belief as a guideline in their business ventures. The company's portfolio of services is comprehensive from brand strategy planning to creative technology and 3D animation.

### 1.4 Demarcation

The author is sampling McCann's clients and other potential companies to utilize virtual reality as a marketing communication tool. The companies are both Finnish and international, bigger and smaller. The survey will also be sent to McCann Sweden's clients to get a broader perspective from other Nordic countries. McCann is a global company and getting samples worldwide would be interesting in comparing results with Finnish clients or

Finnish representatives. However, as Finnish and Swedish business cultures have a resemblance, the results may be alike. There are other technologies abreast with virtual reality with similar potential. However, not all of them are disruptive by nature like virtual reality is.

### 1.5 International Aspect

McCann is a global operator with multinational clients. Many clients operate in multiple countries implementing marketing projects often internationally. Many companies have joint campaigns in neighboring countries. McCann Finland is part of the Nordic group with branches in Sweden, Norway, and Denmark and same questionnaire will be sent to Sweden as well. Sweden yields useful data of attitudes in general level and comparison between Swedish with Finnish attitudes towards new marketing innovations due to the similarity of business cultures. The results from Finnish clients can be benchmarked for international clients.

### 1.6 Benefits

McCann is interested in new marketing communication tools, methods, and solutions that innovations uncover. Hence, it may provide a broader range of services to their clients and may give leverage in their industry with a wider assortment of services for their clients. The primary data indicates the attitudes of McCann's clientele and other companies' towards virtual reality as a marketing communication tool and their typical practice in adopting new technologies, which is beneficial for McCann to discover the virtual reality's market potential.

The author gets credibility and experience from the field, which will revolutionize marketing in next 2-3 years assumed by the author. By being a pioneer in marketing with understanding new technologies and their potential will benefit the author significantly by being a specialist in the field. After the research, the author is specialized in disruptive innovations and technology adoption categories and their characteristics.

### 1.7 Key Concepts

**Innovation**

“The word innovation comes from the Latin, innovare, and is all about the change. Perhaps a more helpful definition in terms of what we actually have to manage is that innovation is a process of creating value from ideas.” (Tidd and Bessant 2014, 3)

**Disruptive innovation**

“..a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors.” (Clayton Christensen 2017).

**Innovation adoption life-cycle**

“..Technology Adoption Life Cycle, a model for understanding the acceptance of new products”. “It turns out our attitude toward technology adoption becomes significant – at least in a marketing sense – any time we are introduced to products that require us to change our current mode of behavior or to modify other products and services we rely on.” (Moore 2014, 11-12).

**Marketing communication**

“Today, marketers are moving toward viewing communication as managing the customer relationship over time.” “..the communication process should start with an audit of all potential touchpoints that target customer may have with the company and its brands” (Armstrong and Kotler 2012, 438)

**Organizational buying behavior**

“Business buying decisions can range from routine to incredibly complex, involving only a few or very many decision makers and buying influences” (Armstrong and Kotler 2012, 194).

# 2 Virtual reality as an innovation and characteristics of potential target markets

This part introduces the reader to different concepts and theories applied to this thesis. Introducing first, the concept of virtual reality, variants of virtual reality, virtual reality applications and virtual reality as a marketing communication tool. Also, the nature of disruptive innovations and diffusion of innovations is explained and how virtual reality is related to them. The theories lay the foundation for the study to understand the nature of virtual reality as a technology and innovation, what are the characteristics of most potential clients, and how to target for currently most befitting markets.

By understanding the stimuli for organizations to implement new marketing technologies, it is vital to understand the key theories, which unfurls a base of research at hand. Developing a new product concept derives from an idea and is a detailed version stated in meaningful consumer terms according to Armstrong and Kotler (2011, 276). The book Crossing the Chasm (Moore, 2014) introduces the stages of product (disruptive by nature) throughout from niche markets to mainstream markets through so-called Chasm. The "Chasm" is a gap between early adopters stage (latter part of the early markets) and early majority stage (first half of the mainstream markets). According to Moore (2014, 170), many innovations never cross the “chasm” due to lack of reference base gained from earlier adopter stage and without support base to next market stages, which are by high preference orientated.

## 2.1 Virtual reality and virtual reality variants

Virtual reality’s only goal is to convince a person to be somewhere else by tricking human brain with illusion by a variety of technologies, claims Tony Parisi (2015, introduction). Virtual reality consists of a set of technologies, such as 3D stereophonic displays, motion tracking hardware, new input devices, computers and mobile phones. The key innovations to create immersion and illusion is actualized when stereoscopic rendering and motion tracking is appropriately combined (Parisi 2015, Chapter summary).

According to Kishino and Milgram (1994, 2), a conventionally held view of virtual reality is an environment in which observer is completely immersed in and able to interrelate in the artificial world, which is not limited by physical laws of nature. Jonathan Steuer (1993, 4) points out that virtual reality is typically described as a medium a breast with radio and television. Today there are multiple areas the virtual reality may be applied. Virtual reality can be utilized for educational and entertaining purposes (Liou, Yang, Chen and

Wernhuar 2017, 110). In this thesis, the author is focusing on virtual reality as a potential marketing communication tool or medium.

Today the developments of the computer industry, especially mobile technologies and various affordable devices have paved the way for virtual reality to become available to the broader audience. Hence, establishing possibilities for virtual reality to penetrate the significant markets in various fields, such as in marketing. Virtual reality hardware for consumers is still young but an evolving domain. Oculus Rift is probably most known headset, but there is also Google's cardboard bulk version that turns a smartphone into virtual reality device. Parisi (2015, device chapter summary) reminds that as virtual reality display cut users from outside world, there is a need for other solutions for devise input systems instead of keyboards, mice and touchscreens.

Augmented reality is introduced in this chapter as a part of virtual reality entity. The augmented reality allows the user observe real world, with virtual objects depict on top of it (Azuma 1997, 356). Nowadays it is often used in smartphones by specific mobile applications (such as IKEA catalog). It may be used with smart phone's camera with a traditional view through the lens, but having an additional animation(s) added to the monitored screen. The augmented reality can be used and has been used already by 1997 in following fields: Doctors may use augmented reality in visualization and training in surgery (Hachach-Haram, 2017). In assembly, maintenance and repair of sophisticated machinery the augmented reality may be utilized in manuals. Annotation and visualization, robot path planning, entertainment and military aircrafts have utilized augmented reality (Azuma 1997, 356). Pokémon Go introduced augmented reality to masses in 2016 July according to Samuel Gibbs (The Guardian 2017). The augmented reality separates from virtual reality as an innovation by not needing additional devices to access virtual or augmented reality, assuming that smartphones may be considered commodity today. Hence, it may be considered not a disruptive

Mixed reality is another alteration of virtual reality and also part of the virtual reality entity. Milgram and Kishino (1994, 2-3) describe mixed reality as a subclass of virtual reality related technologies that merge both virtual and real world along the virtual continuum by connecting the entirely real world with utterly virtual one (see figure 1.). Billinghurst and Kato (1999) define mixed reality as it allows the user to view both virtual and real worlds and at the same time "facilitating a high bandwidth of communication between users and intuitive manipulation of virtual information" (see figure 1). In other words, real and virtual content may react to each other.

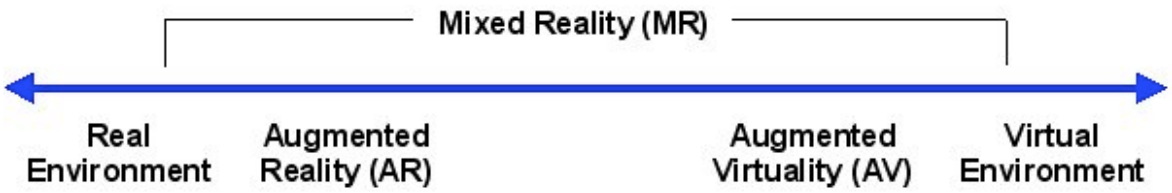


Figure 1. Reality-virtuality continuum (e-Reality 2008)

There is a variety of applications in virtual reality for consumers. According to Parisi (2015, Virtual applications), there are several potential fields in virtual reality. Video games are most common domain people think when they hear about virtual reality. Several companies are creating social virtual worlds. In education, 3D visualization can be a beneficial tool for interactive learning. Some researchers and companies are exploring virtual reality as a workspace with personal information, work projects, etc. There are several examples of tourism using virtual reality with stereoscopic 360-degree panoramas. Architecture and real estate companies are using a virtual reality by using videos and interactive graphics. Paul McCartney and Jack White have broadcasted virtual versions of their live shows. Mozilla and Google are creating virtual reality features for web browsers. Mozilla is exploring visual and interface designs for navigating internet in virtual reality. Then there are many possibilities in simulation and training for military use, medical diagnostics with training, engineering, and design. Paris' opinion is that only imagination is the limit by looking back few decades of technological development.

### 2.2 Virtual reality as marketing communication channel

As explicated in earlier paragraphs the virtual reality may be applied in various ways. This thesis concentrates on virtual reality marketing in advertising and more specifically as marketing communication channel. Hence, in this thesis, virtual reality marketing is referring to virtual reality marketing communication due to convenience for the reader.

Armstrong and Kotler (2011, 405) explain the concept of promotion mix or marketing communication mix, which is a blend of advertising, public relations, personal selling, sales promotion, and direct marketing tools that company seeks to communicate customer value to build a customer relationship persuasively. Armstrong and Kotler (2011, 405) define advertising of the promotion mix as "any paid form of nonpersonal presentation and promotion of ideas, goods, or services by an identified sponsor." The landscape of marketing communication has been changing over digitalization and consumers are more

communication empowered than before. Also, the marketers are shifting from mass marketing to more accurate and narrower micromarketing. Changes in communication technologies are changing ways for companies and customers to communicate with each other. New communication tools present companies' new ways to interact with customers (Armstrong, Kotler 2011, 405-406). The author of this thesis assumes that virtual reality will play a significant role as a new medium of customer interaction in the near future.

There are various industries, which are utilizing virtual reality in marketing such as real estate industry, architects, interior designers and sports industry. Retailers with showrooms are the only small portion of sectors that are already utilizing virtual reality in a marketing communication channel. By reflecting the list, one understands that the boundaries are within the imagination. IKEA Company has an application using augmented reality technology in a catalog of furniture.

The fascination in virtual reality is the interactivity and intensive participation in the virtual world. According to Woodside, Sood and Miller (2008) storytelling plays an explicit role in marketing. The virtual reality allows its user experience the stories from a much more extensive perspective as in the original way of watching a screen, reading or listening. According to Marie-Laure Ryan (2001, 89), the virtual reality theorists Pimentel and Teixeira define immersion in the virtual world as a metaphor that positions itself with the most significant requisite in the reading experience. Ryan (2001, 1) as a literary theorist proposes to transfer immersion and interactivity from technological to a literary domain and develop them into cornerstones of a phenomenology of reading or art of experiencing. According to a pilot study, the virtual reality increases emotional responses; the virtual reality generates stronger emotions and higher activation values than regular computer setting (Estupiñan, Rebelo, Noriega, Ferreira and Duarte, 2014). In other words, virtual reality amplifies the experience of the story being told.

### 2.3 Innovation diffusion and disruptive innovations

Johnson, Whittington, Scholes, Angwin, and Regnér (2014, 306) represent the innovation diffusion a process for innovations to spread or diffuse among the users. The pace of diffusion can be presented with S-curve (see figure 3), which reflects a process of slow adoption of innovation resulting rapid acceleration (tipping point) to "plateau" suggesting the limit to demand. According Moore the tipping point comes after crossing the chasm in penetrating into majority markets. The tipping point is a situation where the demand for product or service abruptly takes off with explosive growth. When the value of the product or service is increased, the more people will use them. Malcolm Gladwell (2007, 33) men-

tions rules for epidemic growth, which may be applied in this thesis. The law of the few has three unique groups of people to transmit the spread. First are the connectors, who have an extensive social network. As Gladwell (2007, 43) puts it: someone who knows everybody. The second group is called the mavens are experts who like to help and educate others (Gladwell 2007, 75). The third group is salesmen who have a talent for persuasion, to convince others of their needs, which even may not exist. However, the message needs to be strong to enable epidemic growth (Gladwell 2007, 99-100).

The stickiness is a rule of how well an idea or product stays in mind. We see many things in our daily lives, and there are things that "sticks" to mind better than others. There is an easy way to bundle information, which in right circumstances can make it irresistible. The trick is to find it (Gladwell 2007, 140).

Regarding this thesis, the tipping point becomes evident when the McCann Helsinki Oy's clients' goals are demonstrably met, and organizations start virtual reality marketing efforts in masses. In theory, the successful marketing efforts with earlier clients should generate more clients to use virtual reality as a marketing communication tool. There lies a danger of underestimation of demand by failing to anticipate the tipping point, which may lead to missed sales and may open a point for competition to capitalize situation. Hence, McCann should be ready to commence multiple projects and not lose their clients to competition. During the "plateau" (see figure 2) the demand growth slows down. Johnson, Whittington, Scholes, Angwin, and Regnér (2014, 306-307) suggest avoiding heavy investments before growth turns down to avoid over-capacity and extra costs. The S-curve does not mean necessarily full extent of diffusion. Innovation does not always replace the older generation products. Virtual reality may not suffuse the older mediums, at least not in the near future. The tripping point (see figure 2) is the opposite for tipping point describing the declining of demand. Johnson, Whittington, Scholes, Angwin, and Regnér (2014, 306-307) share the idea of "the Chasm" with Moore.

According to Johnson, Whittington, Scholes, Angwin, and Regnér (2014, 308) being one of the first-movers allows the company to savor certain advantages, such as experience curve benefits, scale benefits and pre-emption of scarce resources, which refer to cost advantages. Reputation and buyer switching costs allow first-movers to charge high prices. Being late-mover has few advantages as well. Free riding enables companies to imitate innovation by 35 percent fewer expenses than the first-movers. By learning the late-movers may monitor the functionalities of features of innovations, thus avoiding mistakes. Paul Geroski argues that most appropriate response to - radical – innovation is to be the "fast-second" instead of first-mover. The strategy behind this lies in imitating the original

innovator. Hence, the second-mover will not be the actual second company in markets but rather dominate the second wave of competition (Johnson, Whittington, Scholes, Angwin and Regnér 2014, 308-309). There are factors to consider whether to innovate or imitate. The importance of “capturing” the profits of own innovation depends on the ease of how the followers can imitate the original. Imitation is likely if the innovation itself is easy to duplicate. Also, the weak intellectual property rights of the innovation or difficulty in defending them may facilitate emulation. Possessing the assets or resources to up-scale the production is critical. Such assets are called complementary assets. In fast-moving arenas where markets and technological development are moving fast, the first-mover is unlikely to gain a permanent advantage (Johnson, Whittington, Scholes, Angwin and Regnér 2014, 309).

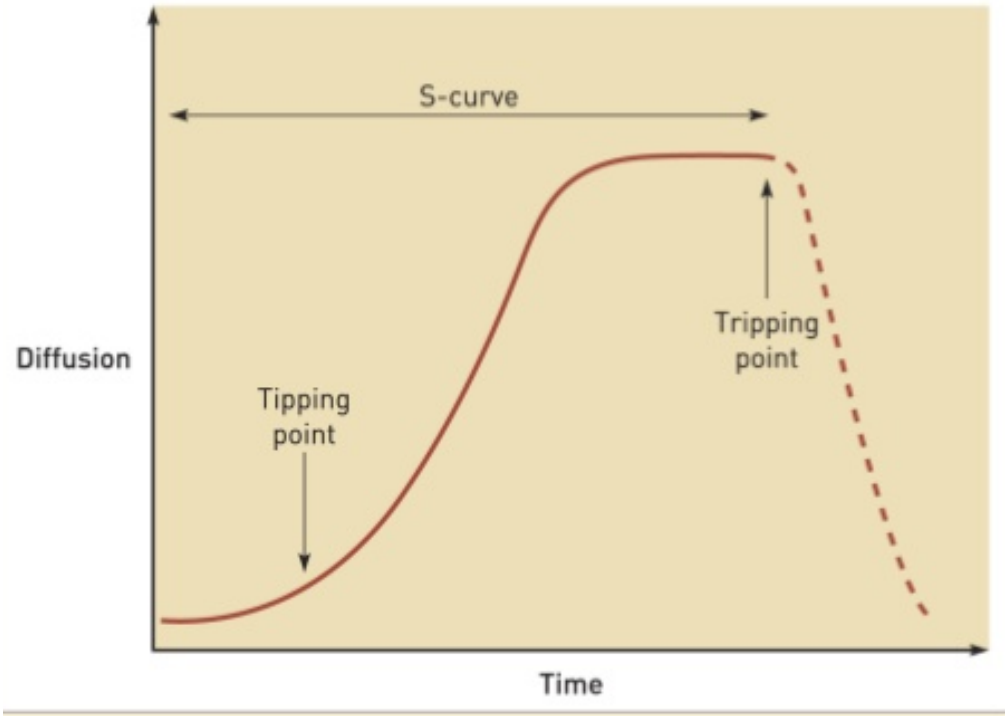


Figure 2. Diffusion of innovation (Johnson, Whittington, Scholes, Angwin and Regnér 2014, 306)

Innovation is usually an extended process of selection of ideas for change and converting them into successful reality according to Tidd and Bessant (2014, 16). The core consists of searching, choosing, implementing and capturing value. To remain organized and to be able to repeat it is the most significant challenge claims Tidd and Bessant (2014, 16). Factors the innovation needs to succeed are clear strategic leadership with direction, innovative organization with structure and climate for people to share knowledge and creativity of the change. Proactive links across boundaries inside the organization and to external

agencies with a role in a process, which can be fathomed by a multidisciplinary network (Tidd and Bessant 2014, 76). The sources of innovation may be distributed into two broad classes: knowledge push and need pull, which usually are acting abreast. Innovation arises from those two's interaction. The need may indicate social or market needs. Regulations are a shaper of innovations, which may establish new trajectories for change that may be exploited by entrepreneurs. Tidd and Bessant (2014, 156) remind that extrapolating on past trends, feedbacks from market segments and customers are desirable short and medium term forecasting method but fail to identify longer-term opportunities and contingencies.

Clayton Christensen introduced the term disruptive innovation in Harvard Business Review 1995 (Bower and Christensen 1995). According to Christensen (2017), most established companies are ahead in development and commercializing next-generation technologies to customers. Such organizations end up producing too complicated, sophisticated and expensive service and products in their markets. The virtual reality as a marketing communication tool may be a too complex entity for McCann Helsinki Oy's clients and their (clients') consumer customers. Customers' needs may not be met due to emerging markets or niche markets and not being familiar with mainstream markets (Bower and Christensen 1995). According to Schmidt and Druehl (2008, 347), a disruptive innovation is a "new product is de-rated with regard to the primary performance dimension most appreciated by mainstream customers of the old product." A new product may perform better on optional dimension opening a new market. Sustaining innovation is the opposite. The new version, improvement or next tier product is called sustaining innovation. Moore (2014, 12) explains disruptive innovation as a situation where one needs to change current behavior or to alter other products or services one is used to rely upon earlier. As an example, a flatscreen television in comparison to CRT television is a next tier sustaining innovation, whereas virtual reality as a disruptive innovation needs a headset and possibly other devices to use that are not customary for most people.

The innovation may pose a threat to established companies, incumbents. According to Clayton Christensen, the problem for incumbents are that managers become too attached to existing assets or they become too close to their customers. The latter situation can be described as when current customers expect and prefer the incremental improvement of current technology and being unable to imagine entirely new technologies. Hence, incumbents may be reluctant to replace their existing business by introducing something profoundly different (Johnson, Whittington, Scholes, Angwin, and Regnér 2014, 310). Disruptive innovation creates new performance trajectory that may be substandard compared to existing technology but poses the potential to become evidently superior (see figure 4).

Such superior performance may generate substantial growth by creating customer segments and undercutting the cost base of competing already existing business models.

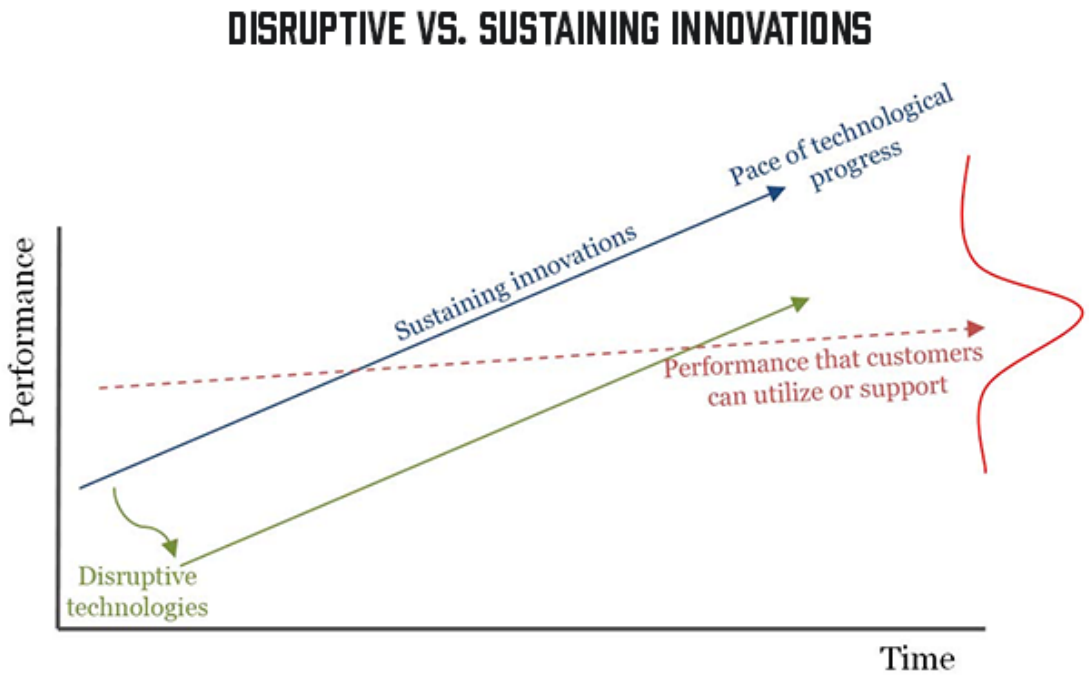


Figure 3. Disruptive innovations vs. sustaining innovation timeline (chainreact.com 2017)

Hence, according to Johnson, Whittington, Scholes, Angwin, and Regnér (2014, 310), it is hard for incumbents to adopt new technology due to poorer performance in early stage and usually need of changing the business model.

### 2.4 Innovation-decision process and adopter categories

Everett Rogers (2003, 168) describes the innovation-decision process as an information seeking and information-processing activity of an individual who is motivated to relieve contingency about the benefits and disadvantages of an innovation.

Rogers (2003,169) mentions five stages of the innovation-decision process: Knowledge occurs when an individual is exposed to innovation and comprehends its functions. Persuasion happens when an individual forms an opinion towards innovation. Decision stage occurs when an individual engages the activities leading into choosing to adopt or reject the innovation. Implementation occurs when an individual sets the new idea in use. Confirmation takes place when individual reverse previous decision if exposed to conflicting messages after seeking reinforcements for decision (Rogers 2003, 169).

Knowledge includes three different subheadings: Awareness knowledge representing acknowledging the existence of the innovation. How-to knowledge contains the correct use of technology, which according to Rogers (2003, 173) is essential variable in the innovation-decision process. Last part is principle-knowledge, which describes how and why the innovation works.

Persuasion stage appears when an individual has shaped negative or positive attitude towards an innovation after knowledge part (Rogers 2003, 174). All innovations carry some degree of uncertainty for individuals, who are typically indecisive of new idea's functionality and looks for support from others to of his or her attitude toward innovation. Hence, an individual seeks social reinforcement from other individuals. The individual needs opinion of peers (Rogers 2003, 175). According to Rogers (2003, 176), the impact of either attitude does not always lead to adoption or desertion of innovation. Rogers differentiates knowledge part as a cognitive-centered and persuasion stage more affective-centered. Sahin (2006, 16) mentions that social reinforcements such as peers and colleagues, etc. affect on individual's views towards the innovation.

At decision stage individual either rejects or adopts the innovation. Adoption according to Rogers is adopting the innovation entirely "as the best course of action available," and rejection is not adopting the innovation (Rogers 2003, 177). Sahin (2006, 16) says that partial trial basis of innovation speeds up the process due to an individual wanting to test innovation in their circumstances. Rogers stresses (2003, 177) that rejection may occur at any stage of the innovation-decision process. Rogers (2003, 178) mentions two different rejection models. Active rejection is an individual who considers of adopting the innovation but discards it later. Passive rejection is a situation when an individual is not even considering adopting an innovation.

At implementation stage, an innovation is deployed. Sahin (2006, 17) mentions how the uncertainty of outcomes can be problematic at this stage. An individual may need technical assistance to reduce the uncertainty of results. Rogers (2003,180) mentions how reinvention often happens at this stage and is described as a degree to which innovation has been altered by adopter in the process of adoption and implementation.

Confirmation stage is the last step, where a decision is made, but the individual is searching looks for support for decision (Sahin 2006, 17). According to Rogers (2003, 189), the decision may be reversed if an individual is exposed to contradictory messages of innovation. Sahin (2006, 17), however, mentions that individuals strive to stay clear of such messages and instead seeks approval and support to confirm their decision.

Rita Gunther McGrath (2013) wrote an article about how technology adoption rate has speeded up. The MIT's technology review by Michael DeGusta (2012) explains how fast smartphones have spread during last ten years. People are adopting new technologies nowadays quicker than before. It means that even disruptive innovations are more easily adopted than before.

Everett Rogers (2003, 22) refines adopter categories as "classification of members of a social system on the basis of innovativeness". Adopter-classes are commonly used generally. The categories include innovators, early adopters, early majority, and laggards. "Innovativeness is the degree to which an individual or another unit of adoption is relatively earlier in adopting new ideas than other members of a system" (Rogers 2003, 22). Rogers (2003, 282) dismisses the Moore's (2014, 25) notion of "the Chasm" or "cracks in the bell curve" and emphasizes innovativeness as a continuous variable between the adjacent adopter categories. Following paragraphs introduce the main characteristics and values of adopter categories as ideal types.

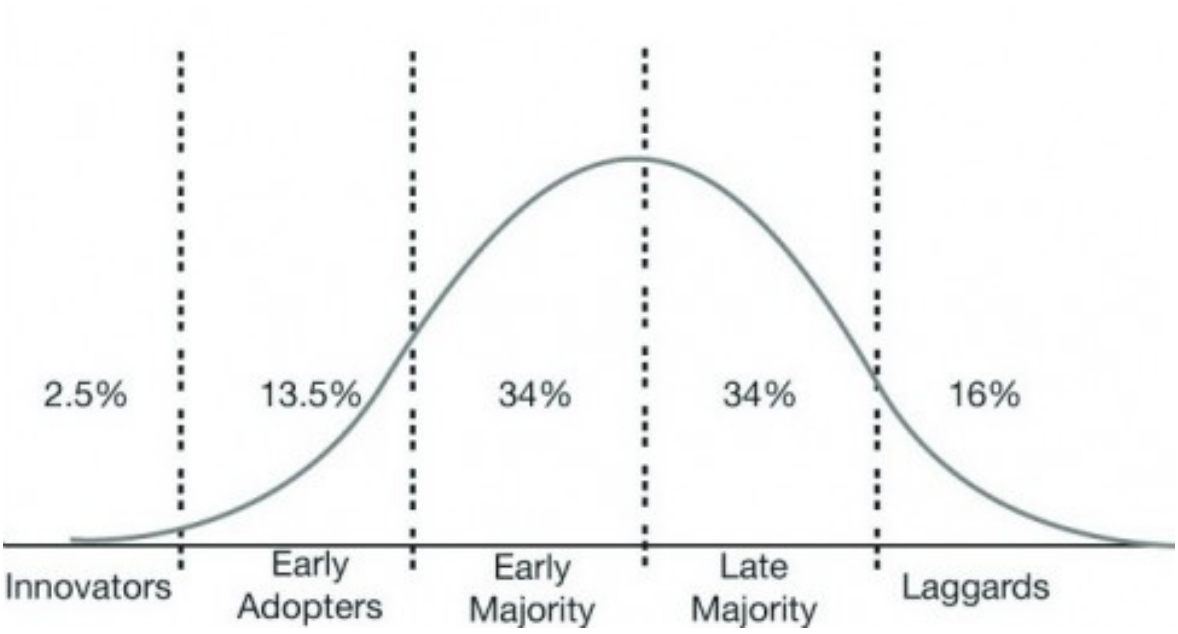


Figure 4. The Bell curve – Adopter classes (Gearmark.com. 2013).

Rogers (2003, 282) describes innovators with almost obsessive venturesomeness. They have a local circle of peer networks and have a cosmopolite social relationship due to their interest in new ideas. Hence, innovators are prepared to cope with a high degree of uncertainty about the innovation during the adoption. Rogers (2003, 283) calls innovators as gatekeepers of innovations in bringing them in outside of the system. Innovators may

not be respected by other members of the social system due to their venturesomeness (Rogers 2003, 283). Moore calls (2014, 37) innovators technology enthusiasts, who adopt new technology for its sake. Moore (2014, 39) agrees with Rogers of innovators role as gatekeeper for new technology. Innovators do not pose significant markets (see figure 4.) but are taken heed in developing and testing innovations and technologies according to Moore (2014, 41).

According to Rogers (2003, 283), the early adopters differ from innovators in being rather localities than cosmopolites and more integrated part of the local systems. Compared to other adopter categories they have the highest degree of opinion leadership in most systems. Rogers (2003, 283) describe early adopters as people who other adopters seek confirmation and acceptance before adopting new ideas. Gladwell (2007, 75) would most likely call such person a maven, whose motive is to educate and help others with their profound knowledge or salesman who persuades others (Gladwell 2007, 76). Sahin (2006) also points out that leadership of early adopter decreases the uncertainty of adopting innovation in the diffusion process. Also, the early adopter's subjective evaluations about innovation of other members of the social system are reached via interpersonal networks (Sahin 2006). Moore calls early adopters visionaries, who seek dawning technology as a strategic opportunity (Moore 2014, 42). According Moore early adopters are not looking improvement but rather a fundamental breakthrough (Moore 2014, 43). Moore claims that early adopters are typically useful in promoting new technologies and ready to stand as a visible reference (Moore 2014, 44-45). The challenges the early adopters may pose can be unachievable expectations of an end product (Moore 2014, 45).

Rogers (2003, 283) describe early majority deliberate, who adopt new ideas right before a typical member of the system. They frequently interact with their peers but rarely hold opinion leadership in a social system. Compared to innovators and early adopters the early majority innovation-decision period is proportionately long. They hardly lead in adopting innovation but follow with the deliberate willingness (Rogers 2003, 284). The early majority present the first half of the major markets and one-third of whole markets. Moore calls early majority pragmatists, who wish not to be the first in line to try innovation but instead seeks improvement and avoid taking risks. An improvement, which is possible to measure (Moore 2014, 54). Moore underlines that early majority is market-centric rather than product-centric by nature compared to early adopters, and are looking a whole and comprehensive product (Moore 2014, 170). A difference in communication between early adopters and early majority is that latter communicates vertically within their industry, whereas early adopter communicates horizontally throughout any sectors (Moore 2014, 57).

Rogers (2003, 284) describe late majority as skeptical who adopts new ideas right after the average member of a system. They present the latter part of the majority markets, which contains one-third of the whole markets. Rogers (2003, 284) points out how the pressure of peers and economic compulsion leads them to adopt the innovation eventually. Moore (2014, 59) calls late majority, conservatists. Moore describes late majority as people, who rather invest at the end of the technology life cycle in to complete product when the product is regarded commodity (Moore 2014, 60). Moore and Sahin share the notion of skepticism among the late majority. Moore points out that the late majority is focused on convenience rather than performance (Moore 2014, 62). Rogers (2003, 284) stresses the pressure of peers to motivate innovation adoption and how the weight of system norms should favor an innovation before the late majority is assured. The most uncertainty of a new idea should be removed before late majority feels safe to adopt due to their comparably scarce resources (Rogers 2003, 284).

Rogers (2003, 284) describe laggards traditional who are the last to adopt an innovation in the social system without opinion leadership. They have the most local view and are secluded in the social networks in their system (Rogers 2003, 284). As the points of reference are in the past, the laggards' decisions are made according to previous deeds, and their interpersonal network consists mostly from the same members of the social system they are part of themselves (Rogers 2003, 284). By lacking the awareness-knowledge, the laggards wants to confirm the innovation functions before adopting it. Laggards' innovation-decision period comparably extended (Rogers 2003, 284). Moore calls laggards skeptics (Moore 2014, 66). Moore points out how skeptics are one-sixth of markets, thus presenting small markets (Moore 2014, 66). According to Moore (2014,67), the laggards are skeptics because the product does not deliver what it promises at the time of purchase. As an example, the laggards would never use smartphones but rather rotary dial telephones if they still existed. Rogers (2003, 284) argues that the "laggards" is bad name due to "non-laggards have a strong pro-innovation bias."

Reinhardt and Gurtner (2015) have researched the different characteristics of early adopters between disruptive and sustaining innovations. The results of the Reinhardt's and Gurtner's (2015, 137) study concludes that "early adopters of disruptive innovations possess in-depth knowledge of the product category". Early adopters of sustaining innovations are not more knowledgeable than late adopters. Early adopters are somewhat more involved in the product category (Reinhardt and Gurtner 2014, 138). The role of monetary resources is essential for two reasons according to Reinhardt and Gurtner (2014, 138). First, the disruptive innovation may be more expensive than the already existing product

but may introduce an additional execution dimension. Second, disruptive innovations suggest a higher level of novelty to the market because of new performance dimension, which increases the risk for the adoption of consumers (Reinhardt and Gurtner 2014, 140). Regarding this thesis, the study of Reinhardt and Gurtner points out that characteristic of the potential client using virtual reality in marketing is a client who has some prior knowledge and possible experience of virtual reality.

As Rogers (2003, 284) stated, laggards have the traditional view, and they are more skeptical about innovations and change agents than the late majority. As the most localized group of the social system, their interpersonal networks mainly consist of other members of the social system from the same category. Moreover, they do not have a leadership role. Because of the limited resources and the lack of awareness-knowledge of innovations, they first want to make sure that innovation works before they adopt. Thus, laggards tend to decide after looking at whether other members of the social system successfully adopt the innovation in the past. Due to all these characteristics, laggards' innovation-decision period is relatively long. In addition to these five categories of adopters, Rogers (2003, 280-281) further described his five categories of adopters in two main groups: earlier adopters and later adopters. Earlier adopters consist of innovators, early adopters, and early majority, while late majority and laggards comprise later adopters. Rogers identifies the differences between these two groups concerning socioeconomic status, personality variables, and communication behaviors, which usually are positively related to innovativeness. For instance, "the individuals or other units in a system who most need the benefits of a new idea (the less educated, less wealthy, and the like) are the last to adopt an innovation" (Rogers, 2003, 295). For Rogers, there was no significant difference in the age distribution of earlier adopters and later adopters, but this categorization and its characteristics are beyond this study.

### 2.5 Target markets

2016 Augmented Reality and Virtual Reality Survey Report (2016) predicts that virtual reality and augmented reality are within 10 years tens of billions of dollars businesses. Such claim indicates that virtual reality, not only in marketing but also in any sense has not yet penetrated the majority markets. However, there have been some marketing efforts implemented with virtual reality already, such as Coca-Cola, McDonald's, New York Times and Volvo only a few to mention. Assuming that the innovator stage has been passed and the early majority has not been reached yet, it may be assumed that the early adopter stage is most fitting at present (end of 2017) by reflecting these assumptions.

Assuming the virtual reality in marketing is at the early adopter stage or currently shifting there. The first stage has been the innovator stage who are only interested of the innovations due to the technology itself (Moore 2014, 37), but they may have little use such innovations and pose small markets (Moore 2014, 41). The second stage is the early adopters that are a visionary type of people, who seeks an opportunity to find strategic leverage of technology. According to Moore (2014, 43) the key point is to understand that visionaries are not looking for improvement but rather a fundamental breakthrough. To fulfill the high expectations of visionary's vision may prove difficult or even impossible. The company needs careful account management and high level of communication with the client. Hence, it is essential to have a project-orientated approach with milestones and phases to get small successes and show to a client the project is developing. Some milestones may turn out valuable as desirable product extension, even though it is not the final product in the eyes of the visionary. The management of expectations is crucial. Often the expectations can be infeasible but controlling demands of visionary and keeping the phases within reason and provide at the end concrete return on investment to celebrate a leap of development. To succeed in bringing a product one needs to start the small niche and make them successful. By up-scaling too early, things may spread too wide to control without having the finished product (Moore 2014, 47). To understand how to market early adopters, one needs to comprehend their vision (Moore 2014, 43)

Customers and clients do not buy products but instead, solutions for their problems or trying to mitigate hindrances as Justin Wilcox (2017) describe buying decisions. Therefore it is natural to find out clients with specific distress the client is facing and understanding whether the product relieves the problem. As Justin Wilcox (Wilcox 2017) puts it that the most potential early adopter customers are the ones that have the problem, know they have it and are continually seeking a solution for it. The ones that are seeking resolution are the most potential client's (Wilcox 2017) and present opportunity to identify them. Those are client's that are active on different forums (Wilcox 2017), such as different social media's (Twitter, LinkedIN, etc.). Regarding virtual reality in marketing as disruptive innovation, such behavior could be a B2B client, who is open-minded (in marketing), technology focused and ready to implement inconvenient marketing efforts.

According Porter (1985, 63) technology gives access to competitive advantage if it provides a significant role in defining relative cost position or differentiation. According Porter (1985, 63) "technology will affect cost or differentiation if it influences the cost driver or drivers of the uniqueness of value activities." Technology may turn out a policy cost driver for its sake, but it can also affect other drivers, such as scale and location. By achieving an advantage in differentiation, the technological development does not necessarily mean

scientific breakthroughs. Mundane changes in activities may prove sufficient (Porter 1985, 63). According to Porter's five forces, which alter markets, the substitute part is the most commonly described effect of technology (Porter 1985, 65). Virtual reality could be considered as a substitute medium regarding, for example, TV and radio. Porter warns that not always new technology improve industry structure but may as well enough have an utterly opposite effect. To improve industry profitability the technological change needs to raise entry barriers, eliminate dominant suppliers or insulate the industry from substitutes. On the other hand, if the technological change leads to more buyer power or lowers entry barriers it may as well destroy the industry attractiveness (Porter 1985, 66). As for technology strategy, which reflects the company's approach to technological development, there are three issues to address: what technology or which technologies to develop, whether or not to seek technological leadership in those technologies and investigate to a possibility of licensing the technology. Each area should be based on an enhancement of company's sustainable competitive advantage (Porter 1985, 66). The company should discover the type of competitive advantage the company is trying to achieve. To figure this out according to Porter (1985, 66) the company should focus on the technologies that would most contribute to a company's general strategy.

According Moore (2014, 18) one cannot jump over any psychographic groups, and it is necessary to "capture" each group and use it as a reference base. Therefore each step should be processed accordingly. To reach majority markets one needs to get over "the Chasm" according to Moore, which is between the early markets and majority markets. To penetrate the majority markets of the early majority the characteristics of such clients Moore describes the pragmatists. Pragmatists need fully working and accomplished product to stay as a top technology using company. Pragmatists need even stronger reference base than visionaries and usually are using preferably market leader with a proven product. Pragmatist's wishes are not to be the first in line to adopt new technologies but are rather following closely the development and adopting it if it proves functional Moore (Moore 2014, 55). In other words, the pragmatists avoid risks. They are ready to approach if it is measurably profitable according to Moore. Hence, the pragmatists are not expecting strategic leap as the previous psychographic group of early adopters – visionaries. The enhancement of innovation may turn out sufficient (Moore 2014, 55).

A practical way to increase knowledge of technology and make it attractive according to the law of the few (Gladwell 2007, 35), is to get a so-called connector, maven or salesman interested and spread the idea of the issue at hand (virtual reality in this case). Such person or organization should have good connections in a certain niche and convince others of superiority or practicality of issue at hand. Such could be an organization that is fore-

run-ner or pioneer in utilizing technology and preferably unconventional marketing efforts successfully. A stickiness effect can utilize in understanding how to bundle virtual reality in context with marketing efforts and its potential. As Gladwell (2007, 140) mentions it clearly that information in right circumstances may become irresistible. Also, the power of context theory works best when virtual reality is associated with marketing and innovative way to utilize it. However, epidemic growth concerns penetrating in majority markets and is dependent on references, which in this thesis' case is next step after acquiring potential early adopters. Moore also mentions epidemic growth by calling it "bowling pin" theory, where one segment is targeted to "knock over" not just one segment but moving to next segment by creating a market expansion (Moore 2014, 50).

Burns, Veeck, and Bush (2017, 38) describe how one needs to identify possible market opportunities. Which products and ideas generate a return on investment and can be accomplished? To determine the possibilities, one needs to understand them. In selecting target markets Burns, Veeck, and Bush (2017, 39) point out that understanding the evolution of the market segment and how competition is succeeding in fulfilling needs of a market segment. In case notable segment has distinct needs according to Burns, Veeck, and Bush (2017, 39), it indicates the segment is growing and whether the demands are not sated or being met poorly by competition, the segment may grow an ideal prospect for a target market. Next question becomes how well the company can satisfy the segment's demand and does the company has enough required core competencies. As mentioned earlier the virtual reality has not been used seemingly much but it is neither unknown. Marketing channels are evolving and McCann Helsinki Oy is discovering ways to use virtual reality in marketing. The competition is not intensive during this study.

There are some significant contemporary challenges the marketers face during the year 2017. The results are collected from Mimi An's survey made for HubSpot (2017). The challenges are listed as most challenging first:

- Generating traffic and leads
- Proving return on investment (ROI) of marketing activities
- Securing enough budget
- Identifying the right technologies to use
- Managing website
- Targeting content for an international audience
- Team training
- Hiring top talent
- Finding an executive sponsor

Regarding this thesis the most viable challenges the author chose were generating leads, proving return on investment of marketing activities and targeting content for an international audience. Outside the list, the author decided contacting new segments, which is rather close to targeting content for the international audience. The chosen challenges may be related to virtual reality as a communication channel assumed by the author. As an example, the leads and traffic, an international audience, new segments may be generated by creating interesting content by using virtual reality. Proving return on investment of marketing activities may be difficult and therefore turn out hindrance for adopting virtual reality as a marketing communication tool.

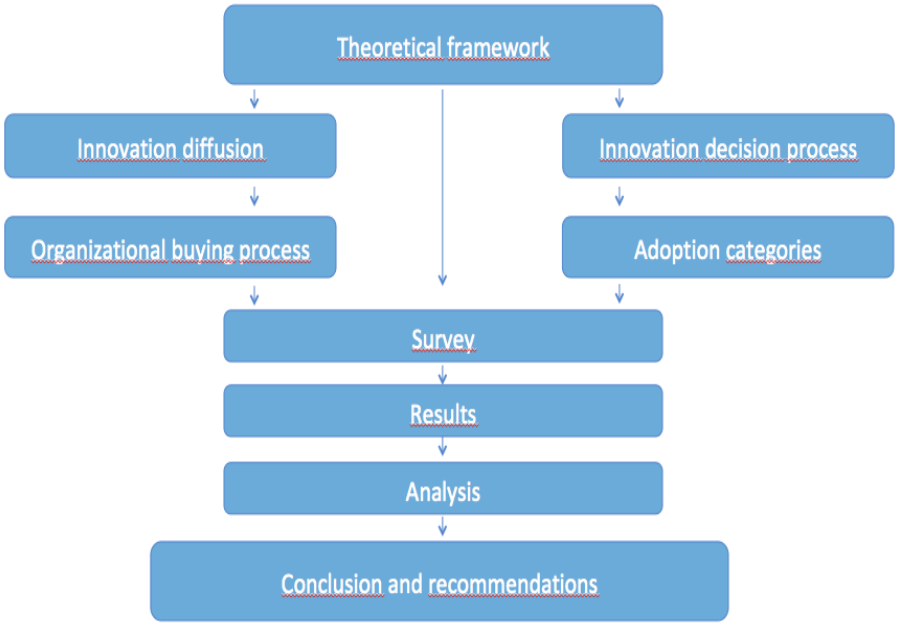


Figure 5. Theoretical framework – research plan.

# 3 Research methods

Burns, Veeck and Bush (2017, 34) describe marketing research as part of marketing. Over the past years, the idea of marketing is that companies should learn from their customers and collaborate with them to adjust to their changing needs (Burns, Veeck and Bush 2017, 34). The focus on marketing research is to help McCann Helsinki Oy to make a decision, whether or not to pursue marketing communication via virtual reality to their existing clients and potential clients (Burns, Veeck and Bush 2017, 37).

This study is mostly using quantitative research but also with qualitative elements. The qualitative method provides the context necessary to figure out individual's actions, opinions and emotions. Also, the qualitative research delivers the notion that cannot be found in quantitative research (Burns, Veeck and Bush 2017, 143). As the emphasis in qualitative methods is in understanding the respondent's point of view, whereas the quantitative method is focused on facts or reason for the social event. Also, the research is structured and measurement is controlled, which are characteristics of quantitative research (Ghauri and Grønhaug 2010, 105). The survey result is oriented and trying to discover patterns of behavior in statistical sense, which can be measured (Ghauri and Grønhaug 2010, 104). The main reason to choose quantitative research method was that the author wanted to keep the survey as approachable as possible. The survey respondents were mostly executive-level managers who do not have very much spare time to use. Also. The author figured that most of the answers could be predetermined. Also, the purpose of research is specific, to discover the market potential for virtual reality for marketing communication and respondent's technology adoption habits (Burns, Veeck and Bush 2017, 144).

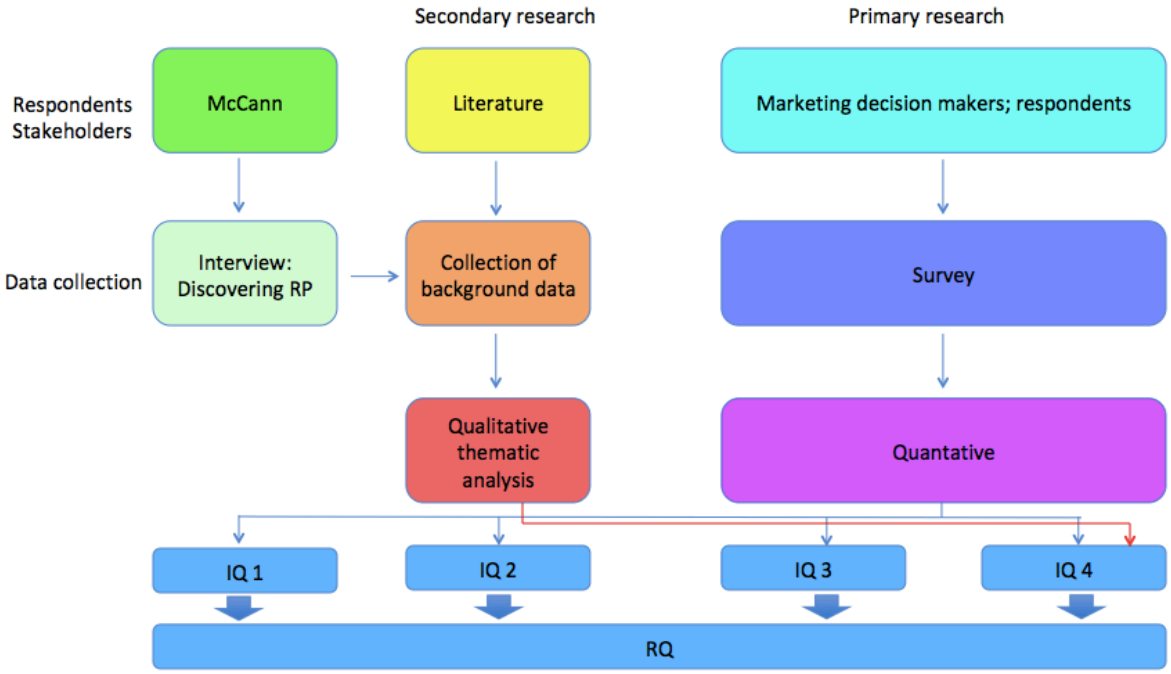


Figure 6. Research design

### 3.1 Descriptive research

There are three different main research designs: explanatory, descriptive and causal research. They vary from structured to unstructured research designs (Ghauri and Grønhaug 2010, 55-56).

Descriptive research understands the problem well and is structured. Burns, Veeck, and Bush (2017, 98-99) point out that descriptive research is conducted when the need is to identify the customers, their buying habits (what brands, quantities, time of purchase and awareness). The researcher prepares sampling plan, which includes the amount and segment of who to interview. Assuming there is a survey, the questions are measurements. The measurements are the data to analyze in discussion part. According to Ghauri (2010, 57) and Grønhaug, the interviews should be conducted the same to avoid biases. Descriptive research may include plenty of variables. According to Burns, Veeck and Bush there are two basic types of studies. The first one is cross-sectional studies that "measure units from a sample of the population interest at only one point in time." Sample surveys are cross-sectional studies that are sampled to represent specific population (Burns, Veeck and Bush 2017, 99). The second type is a longitudinal study that measures same units of population repeatedly over a specified period. The longitudinal research requires data from same members of a sample, which are called panels. Such panels should be committed contributing information at regular time frame (Burns, Veeck and Bush 2017,

99). For this particular study, the author chose a descriptive cross-sectional study due to the suitability of a research problem and market opportunity.

## 3.2 Data collection

There are two different forms of data to be collected: primary data and secondary data. Secondary data is information collected by others for possibly different purposes than the current project at hand. The secondary data has been collected from appropriate books, e-books, articles and surveys. A primary data is the actual data collected for this particular project's problem at hand, which is implemented by a survey (Ghauri and Grønhaug 2010, 90).

### 3.2.1 Secondary data

Secondary data is used to understand and solve research problem at hand. The researcher seeks information about the topic and other studies regarding the research problem. For this particular thesis, the secondary data have issued innovation adoption lifecycle, difference between disruptive and sustaining innovations, and innovation diffusion theories. Virtual reality as a marketing communication tool has quite minimal case studies. Most of the secondary data has been collected for different purposes than this particular study (Ghauri and Grønhaug 2010, 90). The secondary data has been helping to answer the investigative questions eventually leading answer to the research problem. Also, the secondary data have been the base for the questionnaire and helping to choose quantitative research method (Ghauri and Grønhaug 2010, 91). The secondary data may assist in understanding and interpret the primary data. By combining the secondary and primary data the answer to research problem may be discovered. According to Ghauri and Grønhaug (2010, 94), many scholars recommend starting with secondary data sources, which was the order the author of this thesis chose to follow.

### 3.2.2 Primary data

The primary data of this thesis is collected from the McCann Helsinki Oy's clients and other potential clients. The options to collect primary data are via communication or observing, which both have advantages and disadvantages. The main advantage is that it is obtained for the designated project at hand. Hence, it yields consistent data for the research question. Especially in this study the attitudes and possible intentions towards virtual reality as a marketing communication tool, the primary data is only way to answer research

question (Ghauri and Grønhaug 2010, 99-100). The main disadvantages regarding this thesis are merely lack of time of respondents, possible negative consequences of their honest answers and anxiety of embarrassment regarding sensitive issues (Ghauri and Grønhaug 2010, 100). Hence, the questionnaire is rather short and it takes only from one to two minutes to answer. The respondents may also answer anonymously.

The questionnaire is covering all types of primary data. Status data answers the age and gender questions. Psychological and lifestyle data answers personality and behavior. The study is concentrating on organizations, but the respondents are usually executive level decision makers, whose personality may affect on organizational behavior. Attitude and opinion data give inclination how the respondents feel towards technology adoption in general and also virtual reality. Awareness and knowledge data indicates how well are respondents familiar with virtual reality as a concept. The data of intentions and motivations is most interesting regarding the commission company due to their interest whether or not to commence marketing activities with virtual reality as a communication tool and what is the primary stimuli for the respondent.

### 3.2.3 Questionnaire design

Burns, Veeck, and Bush (2017, 205) explain about measurement that marketing research is based on mainly. It is “defined as determining a description or quantity of some property of an object that is of interest to the researcher.” Burns, Veeck, and Bush pointed out that properties are the one to measure and they describe properties as a particular attributes or characteristics of an object that may be differentiated from another object. Properties may be divided into objective and subjective features. Objective properties can be observed and concrete, whereas subjective is the opposite. Both should be translated to a rating scale via a process of scale development (Burns, Veeck and Bush 2017, 206). The different measures are nominal measures, ordinal measures, scale measures. Nominal measures possess merely characteristic of the type. Such question types are often about gender, religion, dwelling, race and so forth. Ordinal measures allow a researcher to rank the order of the respondent or their reply. Such questions often include prioritizing subjects (Burns, Veeck, and Bush 2017, 206).

Scale measures include a number of different measurement types. Scale measures are measuring known levels between distances. First one is ratio scale, which includes true zero and allows constructing ratios to compare results. Second is the interval scale, which is used to measure subjective attributes. To measure individual properties of consumers, one needs to understand the direction and intensity of impression in an understandable

manner, which can be implemented by interval scales. Such scales are being called work-horse scales due to majority part of the marketing research according to Burns, Veeck, and Bush (2017, 209).

Likert scale is commonly used by marketing researchers and was also chosen into this thesis' questionnaire. The Likert scale indicates the degree of agreement or disagreement with the statement. For this thesis understanding the attitudes and feelings towards virtual reality, marketing is essential, thus making Likert scale ideal part of the questionnaire. A semantic scale, on the other hand, does not suit as well as the Likert scale due to its suitability for measuring companies, brands or store images. It works better in comparing two different objects (Burns, Veeck and Bush 2017, 209-210).

The questionnaire is based on investigative questions and secondary data. The survey includes the familiarity of virtual reality in general, which involves respondent's knowledge of the virtual reality. The nominal alternatives in question vary between unawareness and frequent or occasional user. This part answers to the first investigative question regarding respondent's awareness of virtual reality.

Next part answers to the second investigative question regarding the challenges in marketing and possible benefits in virtual reality marketing. The questions regard organizations' and respondent's interest towards virtual reality, and whether or not virtual reality supports the organization's brand and does respondent see virtual reality creating new opportunities in marketing, which are formed by both nominal measure and interval scale measure questions. Also, whether the respondents see virtual reality posing more threats than creating opportunities is conducted by nominal measure question. Following part is using Likert scale measure and it includes different scenarios of possible marketing challenges the organizations may face and how well they have succeeded with them.

Last part answers to a third investigative question regarding readiness to use new marketing technology (virtual reality in this case). This part of the survey seeks to discover the organization's technology adoption habits and respondents' technology adoption category (see part 2.4). Also, this part includes the respondent's opinion of virtual reality's role in people's everyday lives in general. The answer may indicate respondent's receptivity toward virtual reality. In this part, the nominal measure questions are applied.

The questions regarding the specific organization and respondent's title are not included due to the inconvenience of personal views of certain issues, which may be not in line with the organization's policies. The virtual reality in the questionnaire regards to virtual reality

as marketing communication media. The questions about the age and gender are included in the survey.

# 4 Results and analysis

This part introduces the results of the survey with the interpretation of survey answers. The results are presented by each investigative question separately.

## 4.1 Respondents

The survey was sent to over 200 recipients of McCann Finland Oy and other companies potential to use virtual reality for marketing communication. The population was nearly sufficient for academic research, but as a number of responses were 38, the interpretation should be kept restrained. Hence, making clear implications is not possible. Careful indications may be performed due to generic nature of the survey to understand the general views of respondents towards virtual reality as a marketing communication tool.

The companies' lines of businesses and sizes varied a lot. To introduce some respondent's lines of businesses the survey was sent to:
Real estate, law, media companies, wholesale business', interior design companies, financial, HoReCa, Start Up's, software companies, car dealers, human resource and labor hire companies, marketers, accounting companies, associations, insurance companies, waste management and logistics. The companies included companies that are internationally involved and some Swedish companies.

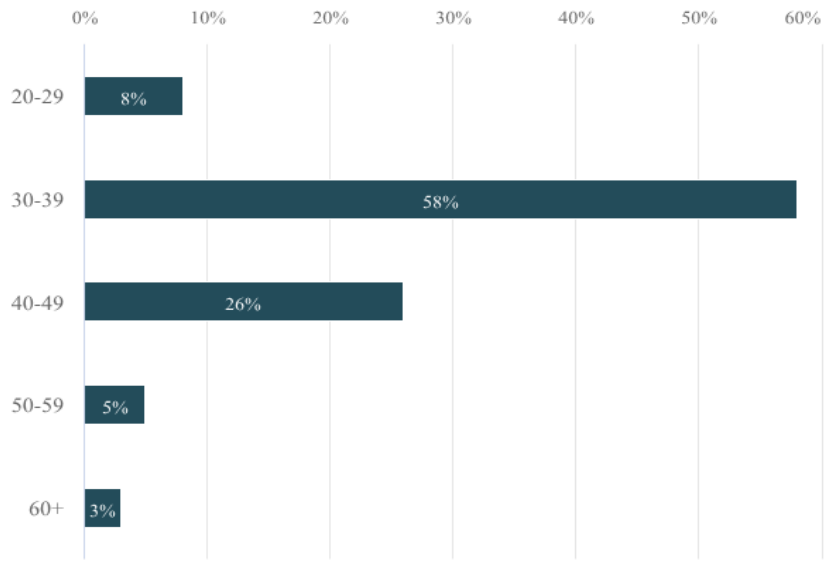


Figure 7. Age distribution.

76 percent of respondents were males and 24 percent females. The age distribution was following (see figure 7):

8% of respondents were 20-29, 58% were aged between 30-39, 26% were aged between 40-49, 5% were 50-59 year old and 3% were over 60 years old.

### 4.2 Awareness of virtual reality

Over 60 percent have personal experiences and over 30 percent understands the concept covering 95 percent of the whole population (see figure 8).

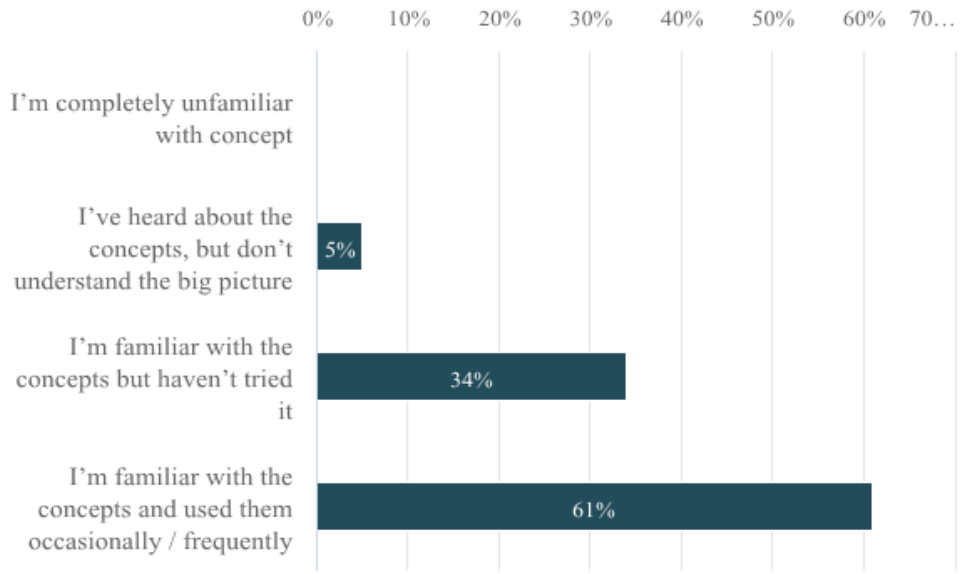


Figure 8. Question: How familiar are you with a concept virtual reality?

Hence, the general awareness of the whole population of the survey is well aware. None of the respondents were completely unfamiliar with virtual reality and small share (5 percent) had heard about the virtual reality but did not comprehend the overall view.

### 4.3 Challenges in marketing and benefits of virtual reality

The dispersion was apparent regarding the virtual reality supporting the organization's brand (see figure 9). Hence, there were no strong indications in any direction to make a further assumption. However, the 39 percentages agreed virtual reality supporting their organization's brand, which is notable amount.

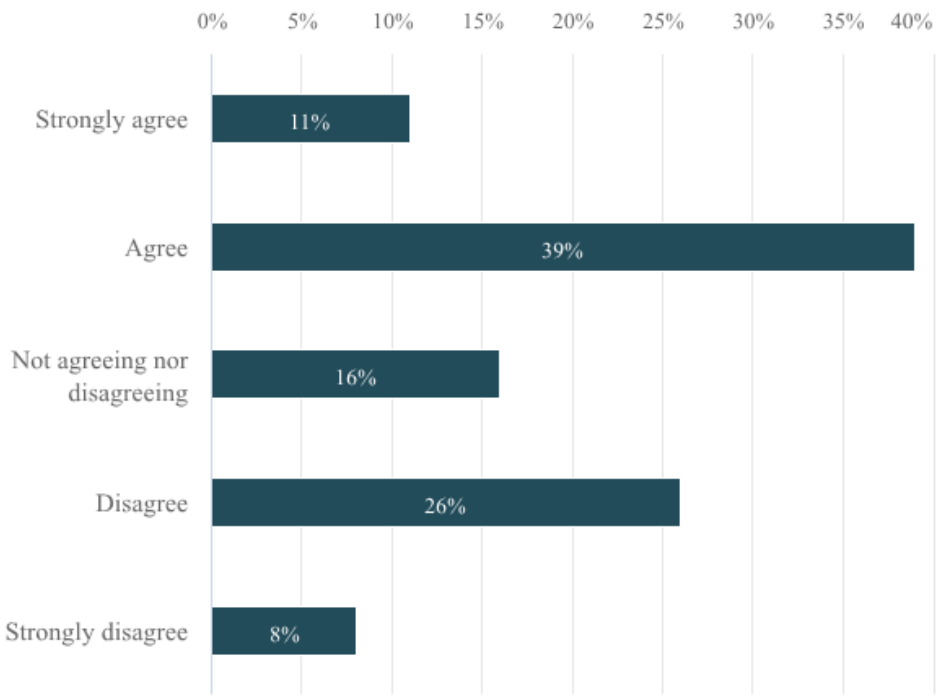


Figure 9. Does virtual reality support the brand of your company?

The 43 percent strongly agreed and 51 percent agreed on virtual reality as a gateway to access opportunities in marketing according to answers (see figure 10.).

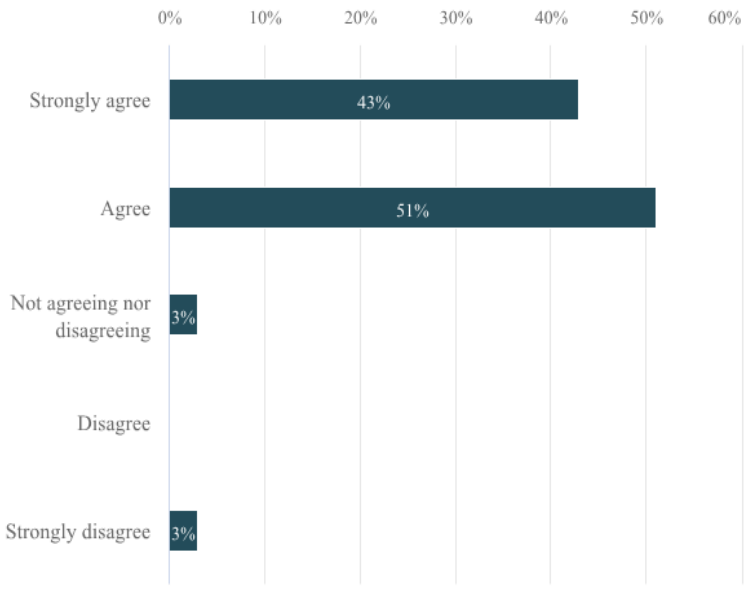


Figure 10. Do you agree? ”Virtual reality is a gateway to access new opportunities in marketing?”

The result indicated a strong market potential for virtual reality as a marketing communication tool (see figure 10). Hence, the population of the survey was rather small making ac-

curate assumption impossible. However, reflecting results, the respondent's saw virtual reality in beneficial by creating new opportunities in marketing.

58 percent did not agree virtual reality was posing more threats than opportunities. 18 percent both strongly disagreed or did not have an opinion.

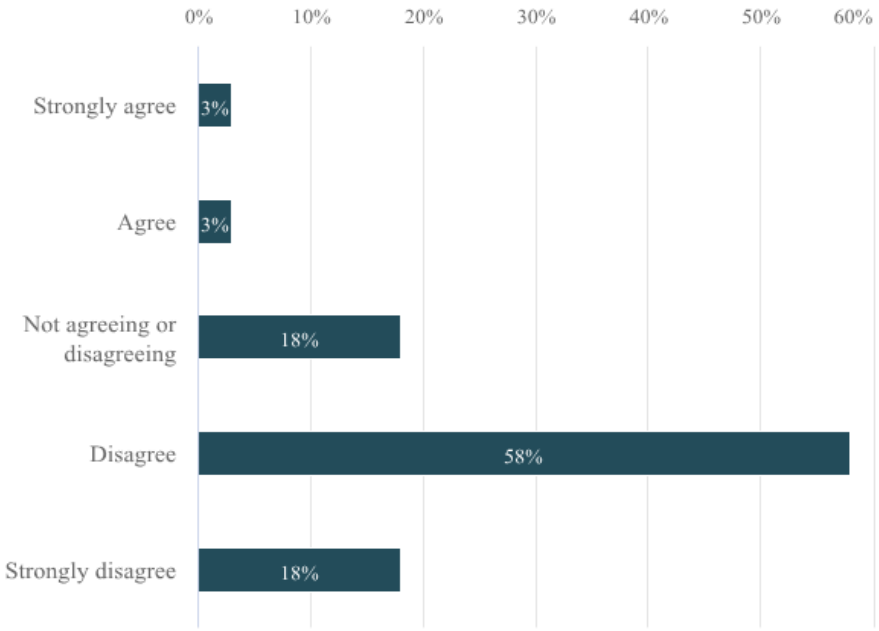


Figure 11. Do you agree? "Virtual reality poses more threats rather than creates opportunities?"

Not having an opinion may be a result of not comprehending feelings toward virtual reality. All in all, respondents mainly saw virtual reality beneficial in creating opportunities rather than threats (see figure 11).

An open question "If you answered strongly agree or agree (in question [Do you agree? "Virtual reality poses more threats rather than creates opportunities?"]), could you explain why shortly?"

There were two valid open answers regarding attitudes towards virtual reality. One respondent's answer indicated a positive attitude towards virtual reality as a next big advancement after Internet in using technology in peoples' everyday lives. Another respondent gave an impression that virtual reality is not at all important and does not wish to have a part in it.

The virtual reality may be medium that could help contacting new segments. 39 percent had a bit challenges in contacting new segments, whereas 34 percentage found it challenging. Different companies have different challenges, which may be a cause of diversity of segments. In some companies, the segmentation may be narrower than in others and it may also depend on the variation of products or services the organization provides. 11 percent could not tell about challenges in contacting new segments, which may be a cause of respondent's role in the organization; the person may not have access to actual data. The mean in challenges (1 stands for no challenges and 5 stands for major challenges) is 2.74, and 2.42 with success, which in both cases was situated close to midsection (see figure 12 and table 2).

Table 2. What level of challenges your organization is facing in following marketing efforts?

| | **No challenges** | **A bit challenging** | **Cannot tell** | **Challenging** | **Very challenging** | **Total** |
|---|---|---|---|---|---|---|
| Challenges to contact new segments | 5 | 15 | 4 | 13 | 1 | 38 |
| | 13.16 | 39.47 | 10.53 | 34.21 | 2.63 | % |
| Challenges in generating traffic and leads | 3 | 14 | 8 | 10 | 3 | 38 |
| | 7.89 | 36.84 | 21.05 | 26.32 | 7.89 | % |
| Challenges to target content for international audience | 5 | 7 | 15 | 9 | 2 | 38 |
| | 13.16 | 18.42 | 39.47 | 23.68 | 5.26 | % |
| Challenges to prove return on investment (ROI) of marketing activities | 4 | 12 | 11 | 8 | 3 | 38 |
| | 10.53 | 31.58 | 28.95 | 21.05 | 7.89 | % |

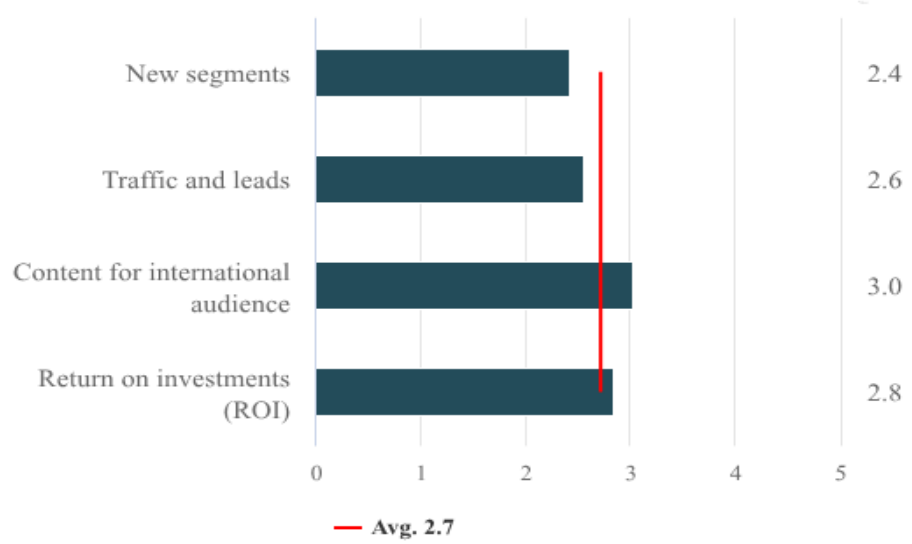


Figure 12. How well your organization's marketing efforts have succeeded to overcome the mentioned challenges?

Challenges regarding traffic and leads were following a similar pattern with previous challenges (contacting segments). The virtual reality may create traffic and by simply creating interesting content. 37 percent had a bit challenges in creating traffic and leads and 26 percent found it challenging. 21 percent could not tell, which may be caused by respondent's position in the organization or simply not knowing the matter. Organizations with major problems and without any problems both were 8 percent (see table 2). The mean in challenges is 2.89, and 2.55 with success (see figure 12).

39 percent of the population could not tell about the challenges in targeting content for an international audience, which may be a cause of the companies' lack of international business or the businesses may have independent branch offices in other countries. However, 24 percent found it challenging and 5 percent very challenging, which may indicate difficulties in creating enough international content or not understanding the international markets. The mean in challenges is 2.79, and 3.03 with success. 8 percent overcame the challenges very well, 16 percent quite well, 47 percent could not tell, 24 percent poorly and 5 percent very poorly (see table 2 and figure 12).

### 4.4 Readiness to utilize new marketing technology

The interest in virtual reality was quite dispersed (see figure 13). Hence, 50 percent of respondents answered virtual reality was bringing additional value to the company, and 21

percent mentioned their company being involved somehow with virtual reality already. 18 percent were interested but could not fathom any additional value for the company. 11 percentage were not interested at all in virtual reality.

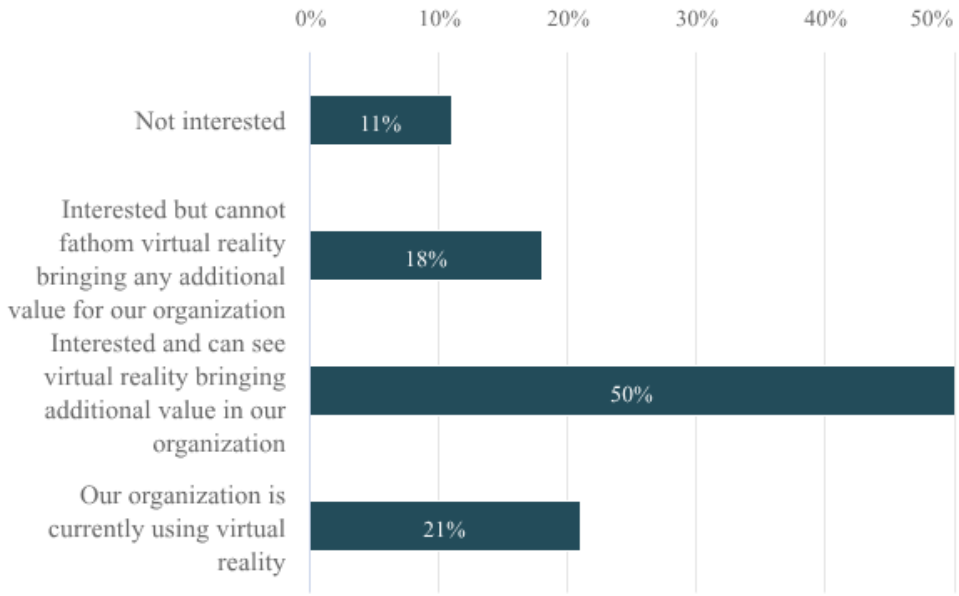


Figure 13. How interested is your organization about virtual reality?

The 50 percent of the population answered being eager to benefit from new technologies (see figure 14) but not wishing to be the first to try them. By not wanting to be the first indicates according to Moore (2014, 55) early majority, pragmatists, who seek references before shifting to new technology. 45 percent of the population claimed readiness in taking risks in getting strategic leverage, which according to Moore (2014, 42) indicates to early adopters, the visionaries. 5 percent of respondents mentioned being one of the last ones in adopting new technologies, which indicates to late majority. None of the respondents agreed to stay away from new technologies.

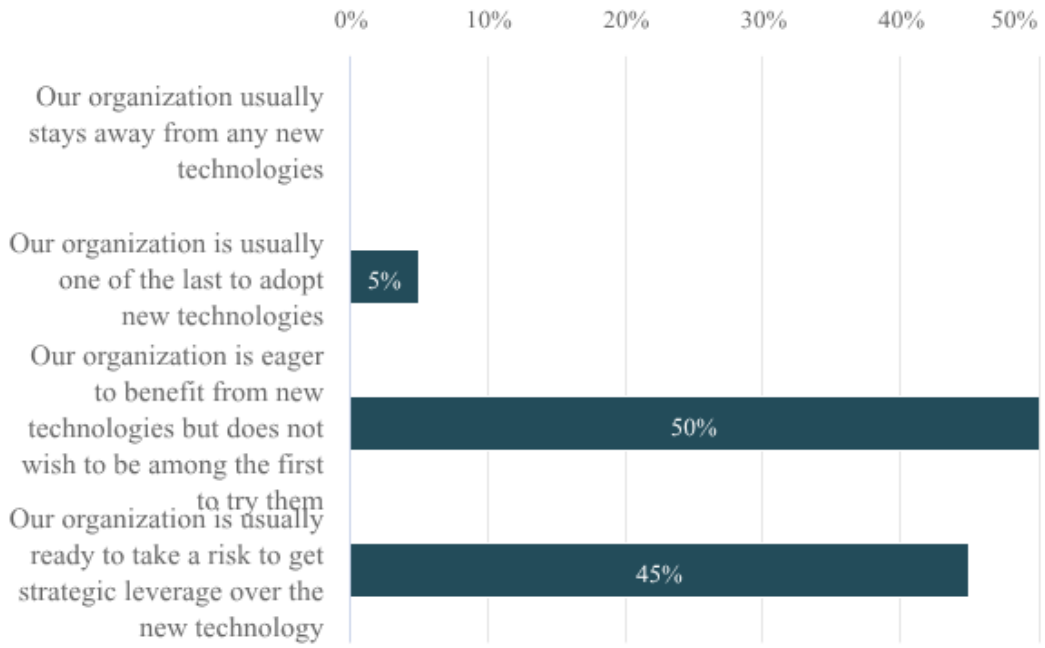


Figure 14. Question: How long does it usually take for your organization to use new technologies?

The answers regarding general attitude towards the virtual reality and how did the respondent fathom the role of virtual reality in people's lives in near future were indicating positively towards virtual reality. 34 percent strongly agreed, and 55 percentages agreed virtual reality's role in helping people in everyday lives, which inclined to readiness for people to use virtual reality in their personal lives (see figure 15). The small minority did not agree, which most likely shows lack of readiness to use virtual reality in their everyday lives in near future.

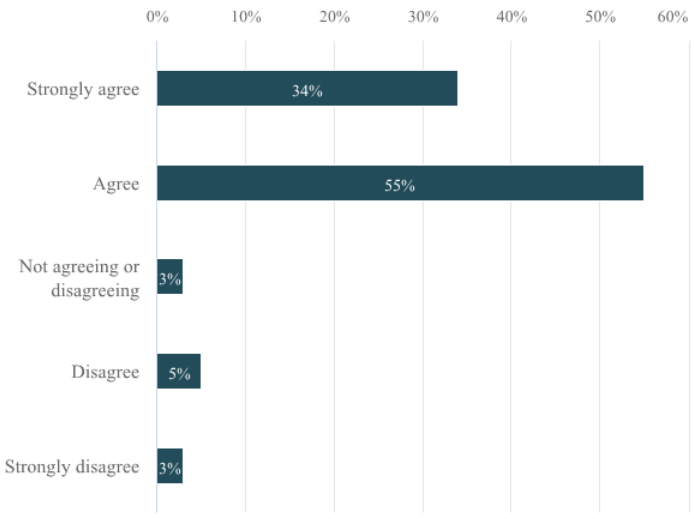

Figure 15. Question: Do you agree? ”Virtual reality helps people in everyday lives in near future”

There were two joint questions, which should have followed a somewhat same pattern (see figures 14 and 16). Hence, they are not precisely similar. However, both questions tried to figure out the technology adoption habits. 24 percentage mentioned being among the first in adopting technologies. The average between questions 3 and 5 of early adopters was 34.5 percentage. The gap between answers was quite large, thus making accurate assumptions not possible. 66 percent claimed to adopt technologies after references, which indicated pragmatists. The mean between question 3 and 5 regarding pragmatists was 58 percent. The late majority of respondents were 8 percent who were happy with current technology and ready to move on after the next technology is proven, affordable and reliable. 3 percent answered not being interested and adopting after the technology becomes necessary. The last part was described as laggards.

The lines of businesses were affecting the answers the author assumed. As an example, start-up companies can be more accustomed to new technologies compared to law firms, which competencies are not directly related to technology.

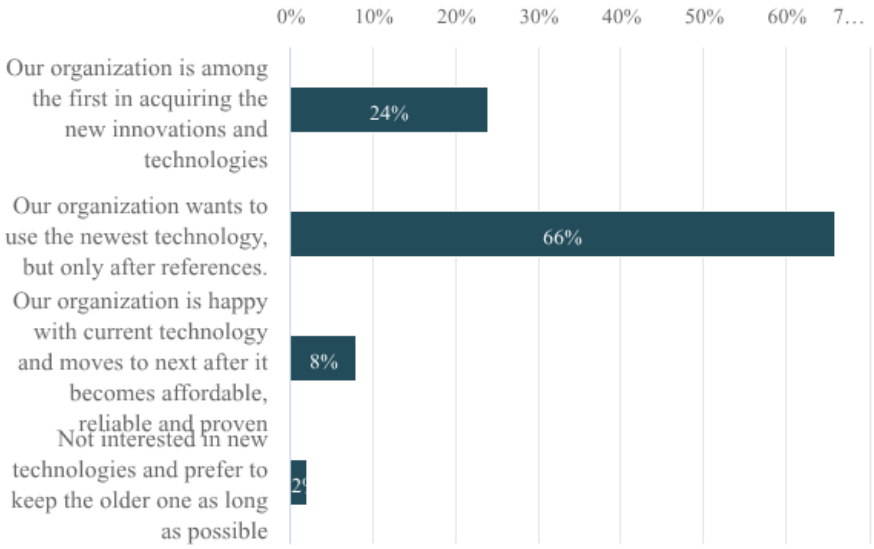


Figure 16. Question: Which of following types describes your organization best?

Difficulties in proving return on investments may restrain the organization’s engagement for new operations, such as taking up virtual reality as a new marketing communication tool. 11 percent had no challenges, 32 percent of respondents had a bit challenges in proving return on investment in marketing efforts. 29 percent did not know or could not tell the issue, which may be a cause of their position in the organization. Such information

would probably need some expertise in analyzing the marketing efforts and having access to appropriate data. 21 percent found the return on investment challenging and 8 percent had significant difficulties. The mean in challenges is 2.84, and 284 (1 stands for no challenges and 5 for major challenges) with success of marketing efforts. 11 percent overcame the challenges very well, 26 percent quite well, 37 percent could not tell, 21 percent poorly and 5 percent very poorly.

An open question about other challenges the organizations are facing yielded 9 answers.

”Channels”
The answer may indicate challenges in choosing the most suitable marketing channels to optimize the success of marketing efforts.

“Increasing the level of marketing expertise in own industry, so that a small marketing budget can be used as efficiently as possible”
The answer is quite clear and emphasizes on optimizing small budget.

“All the offered marketing is unqualified. The best solution would be an in-house professional, who stays up to date regarding technology and motivated.”
The answer may indicate to the unsatisfied organization regarding external marketing efforts and would prefer internal staff in managing marketing efforts with excellent know-how.

“Our marketing is very targeted, and we do not exercise so-called mass marketing.”
It may be assumed that respondent refers to well-managed marketing efforts without marketing to unwanted segments.

“The goals of marketing vary, and often aim for a long period, thus proving return on investment challenging.”
The answer indicates that proving return on investment may be challenging as well as goals in marketing. The key could be understanding the purpose of each marketing effort, thus figuring out the key performance indicators.

“Our company is still young and on a search of identity both in marketing and products. Also, the market is still young and growing, so the work is still underway.”
The answer may indicate to a start-up company that has not yet had marketing efforts.

“Targeting of marketing efficiently to the right target group is still relatively challenging, although social media has greatly improved the situation.”
The answer is rather clear and leaves very little analysis.

“Lack of motivation.”
The answer is clear and leaves very little analysis.

“Marketing is shifting into social media.”
The respondent view is clear.

Open question: “You can write here anything else you wish to say regarding virtual reality.”
The question is open and answers indicate readiness to adopt virtual reality in marketing.
N 6.

“Very good possibilities.”
The answer possibly indicates virtual reality posing good possibilities regarding marketing efforts.

“It (virtual reality) comes when comes and it does not revolutionize my world.”
The answer indicates indifference towards virtual reality.

“I believe in VR's possibilities, but high-quality production is still too expensive for the versatile use.”
The respondent considers virtual reality marketing efforts too expensive.

“AR (augmented reality) will probably be a bigger thing than virtual reality.”
The answer is clear. The author regarded augmented reality in this study as a sub-class of virtual reality.

“The closer to this practice is our business google’s my business application the "walk in the possible."
The respondent possibly prefers Google’s My Business application over virtual reality.

“Virtual unreality.”
The respondent may not be interested in virtual reality by any means.

# 5 Discussion

This part includes key findings of the research, recommendations for the commissioning company, challenges and limitations of the study, and self-evaluation.

## 5.1 Key findings

Respondents were well aware of virtual reality, and the majority had used it already. Respondents' attitudes towards virtual reality were positive and many approved virtual reality's role as part of peoples everyday lives.

Most of the respondents concur with a notion of virtual reality creating opportunities in marketing. However, not all agreed virtual reality to support their organization's brand. Half of the organizations were interested in virtual reality and found it bringing additional value to their organization. One fifth was already using virtual reality in some way.

Half of the respondents were eager to benefit from new technologies but does not wish to be among the first. In other words, those respondents are reference oriented, thus not potential early adopters but rather potential early majority. A bit less than the other half claimed to have the readiness to take a risk in getting strategic leverage over the new technology. Those answers may indicate desire rather than actual deeds.

Two-thirds answered that their organization wants to use newest technologies but only after references. One forth mentioned their organization to be among the first in acquiring the innovations and technologies, which may be the actual technology adoption habit.

The challenges in marketing efforts were diverse. Most had challenges and a bit challenging in contacting new segments, and generating traffic and leads. In proving return on investment, the majority had a bit challenges and no challenges at all. However, one-third could not tell. One open comment regarded how measuring return on investment may be challenging due to different purposes of marketing.

Open answers indicated that some respondents strive to target marketing more efficiently and how social media has been helping with it. Also, that marketing is shifting towards social media. The augmented reality was mentioned to be a bigger thing that virtual reality. The high costs of virtual reality productions were mentioned and may be an obstacle to utilize virtual reality.

Interestedly the most potential clients are close to 13,16 percentage, which is close to the percentage of the early adopters of the whole population in Bell curve (see figure 4). Those respondents were most receptive towards virtual reality and their technology adoption habits were in line with early adopters characteristics.

There was little opposition towards virtual reality but rather marginal altogether.

### 5.2 Recommendations

The secondary data gave a good base for the thesis and the author figured out that virtual reality is most likely at early adopters stage or shifting there. That indicates that markets for virtual reality as a marketing communication tool exists and people are aware and interested in it. Also, people feel in general that there is good potential for virtual reality in marketing and it may also have quite a large role in people's lives. That means people are ready to engage virtual reality in theory, even though it is at this point (years 2017-2018) disruptive innovation by nature. There are implications that people are more ready to adopt new technologies these days compared before (McGrath 2013).

The most likely market segment is early adopters who seek strategic leverage despite the risks. Many of respondents mentioned having traits that may be interpreted as distinctive behavior for early adopters. 50 to 66 percent of respondents are interested in engaging new technologies but only after it has proven. As the bell curve (see figure 5) shows that early majority is about one-third of whole markets; there may be massive opportunities after succeeding with early adopters and using them as preferences.

People seem to be interested in more accurate segment targeting and are using social media quite much. Also proving return on investment is challenging and this may pose difficulties to engage new mediums. The author believes that carefully planned virtual reality marketing efforts may be efficient in targeting different segments, both domestic and international. The return on investment should be proven to lower the engagement factor to justify the new marketing medium for organizations.

The author strongly recommends the commissioning company to commence marketing efforts for virtual reality as a marketing communication tool. There is considerable interest towards virtual reality and there surely will be a prominent rivalry. However, people's actions are not always following their desires, which in this case mean their answers. Virtual reality and all its parallel or subclasses are likely to be part of people's lives in some form during next years, and marketing usually follows those trends.

### 5.3 Challenges and limitations

The main difficulty during the thesis process has been the novelty factor of the virtual reality. Virtual reality has been around for a long time but is showing some potential as medium lately. Therefore there has been very little material and case studies regarding virtual reality in marketing. Even though the same theories may be applied in virtual reality like in old mediums the virtual reality is disruptive by nature. Hence, the theories should be used differently compared to older mediums.

The original plan of the survey was to execute it during virtual reality and other marketing technology introduction events provided by the case company, but preparations did not make it in time for this thesis. The population of the survey would most likely have been higher. The survey was executed via the Internet, but the total population stayed rather low, not making possible to make accurate conclusions by primary research.

The survey itself was satisfactory, but it could have been conducted even better. Some questions could have been better formulated. For example, threats and opportunities are not opposites and therefore may be challenging to answer. Also, marketing challenges and success in overcoming them as separate questions could have been confusing in the quantitative survey. The question about gender could have included one more alternative. Nowadays there are so-called trans-genders and other variations of genders, which could have had an option to choose from, for the sake of the sexual equality. The author would have wanted to ask more questions, but after considering that segment of the population as executive level managers, the author decided to keep the survey short and easy to engage. The author also considered the possibility of changing the research method from quantitative to qualitative after discovering that the population will stay low. However, the author discarded the idea and stayed in the original plan because many executive level managers are too busy to give thorough interviews as qualitative interview usually takes more time than a quantitative survey. Also, the author did not want to postpone the graduation.

### 5.4 Self-evaluation

The process was one significant challenge and seeing it through the author had to put all his energy to complete it. The author asked many times why did he not choose something more straightforward project, but could not fail himself by giving up. Instead, the author decided to continue despite the challenges. He studied fascinating theories and collected

a vast knowledge of innovations and adoption of innovations. The enormous learning experience has paved way for authors career plan of being involved in marketing especially in start-ups, which often include disrupted innovations.

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# Appendices

### Appendix 1. Cover letter for the thesis (Finnish)

Hei,

Olet varmaan kuullut mainittavan virtuaalitodellisuudesta. Virtuaalitodellisuus saattaa mullistaa maailmaa monin tavoin. Markkinoinnin saralla virtuaalitodellisuus voi synnyttää uusia mahdollisuuksia mm. kommunikoida erilaisten kohderyhmien kanssa.

Osallistuthan lyhyeen markkinointiteknologia-aiheiseen kyselyyn tästä, joka on osa opinnäytetyöprojektia. Vastaamiseen menee 1-2 minuuttia. Osallistujien kesken arvotaan kaksi 20€ lahjakorttia Freshstop Elielin kahvilaan, josta voit napata mukaan vaikkapa vihersmoothien, cappuccinon ja raakasuklaan rautatieasemalta.

Ystävällisin terveisin,

Juho Ryynänen

### Appendix 2. Cover letter for the thesis (English)

Hi,

You have probably heard about virtual reality. Virtual reality may change the world in many ways. In marketing, the virtual reality may develop new opportunities i.e. in communicating with different segments.

Please participate in a short survey regarding marketing technology here. The questionnaire is part of a thesis project in Haaga-Helia University of applied sciences in Helsinki. Answering to survey will take only 1-2 minutes.

Thank you in advance!

Best Regards,
Juho Ryynänen

**Appendix 3. The survey (Finnish)**

Virtuaalitodellisuus

**1.** Kuinka tuttu on käsite virtuaalitodellisuus?

- ◯ En ole koskaan kuullut
- ◯ Olen kuullut mainittavan, mutta en ole tutustunut siihen
- ◯ Käsite on tuttu, mutta en ole käyttänyt
- ◯ Käsite on tuttu ja käytän sitä silloin tällöin/usein

**2.** Kuinka kiinnostunut yrityksenne on virtuaalitodellisuudesta?

- ◯ Ei ollenkaan kiinnostunut
- ◯ Kiinnostunut, mutta ei näe virtuaalitodellisuuden tuovan lisäarvoa yritykselle
- ◯ Kiinnostunut, näen virtuaalitodellisuuden tuovan lisäarvoa yritykselle
- ◯ Virtuaalitodellisuus on mukana yrityksen toiminnassa

**3.** Kauanko yrityksellä yleensä kestää ottaa käyttöön uusi teknologia?

- ◯ Yrityksemme pysyy kaukana uusista teknologioista
- ◯ Yrityksemme on yleensä viimeisten joukossa ottamassa käyttöön uusimpia teknologioita
- ◯ Yrityksemme on innokas hyötymään uusista teknologioista, mutta ei halua olla ensimmäisten joukossa kokeilemassa niitä
- ◯ Yrityksemme on yleensä valmis ottamaan riskin saadakseen maksimaalisen strategisen hyödyn uudesta teknologiasta

**4.** Kuinka suhtaudut väitteeseen: ”Virtuaalitodellisuus auttaa ihmisiä arjessa lähitulevaisuudessa”?

- ◯ Vahvasti samaa mieltä
- ◯ Jokseenkin samaa mieltä

◯ Ei samaa mieltä eikä eri mieltä

◯ Eri mieltä

◯ Vahvasti eri mieltä

**5.** Mikä seuraavista kuvaa yritystänne parhaiten?

◯ Yrityksemme hankkii ensimmäisten joukossa uusimmat innovaatiot ja teknologiat

◯ Yrityksemme haluaa uusimmat teknologiat käyttöönsä, mutta vasta kun ne ovat käytännössä testattu toimiviksi

◯ Yrityksemme on tyytyväinen nykytilanteeseen ja siirtyy seuraavaan teknologiaan vasta kun siitä tulee edullista ja on yleisesti käytössä

◯ Yrityksemme ei ole lähtökohtaisesti kiinnostunut uusista teknologioista ja pitäydymme mieluiten vanhassa niin pitkään kun vain mahdollista

**6.** Tukeeko virtuaalitodellisuus yrityksenne brändiä?

◯ Tukee vahvasti

◯ Tukee jonkin verran

◯ En osaa sanoa

◯ Saattaa tukea tulevaisuudessa

◯ Ei tue laisinkaan

**7.** Kuinka suhtaudut väitteeseen: ”Virtuaalitodellisuus avaa uusia mahdollisuuksia markkinoinnissa”

◯ Vahvasti samaa mieltä

◯ Jokseenkin samaa mieltä

◯ Ei samaa mieltä eikä eri mieltä

◯ Eri mieltä

◯ Vahvasti eri mieltä

**8.** Kuinka suhtaudut väitteeseen: "Virtuaalitodellisuus synnyttää enemmän uhkia kuin mahdollisuuksia?”

◯ Vahvasti samaa mieltä

◯ Jokseenkin samaa mieltä

◯ Ei samaa mieltä eikä eri mieltä

◯ Eri mieltä

◯ Vahvasti eri mieltä

**9.** Jos vastasit ***vahvasti samaa mieltä*** TAI ***jokseenkin samaa mieltä***, voisitko selittää lyhyesti miksi?

_____

_____

_____

**10.** Voisitko kuvailla onko yrityksenne kohdannut seuraavanlaisia haasteita markkinoinnissa ja jos on, niin millä tasolla?

| | Ei haasteita | Hieman haastavaa | En osaa sanoa | Haastavaa | Erittäin haastavaa |
|---|---|---|---|---|---|
| Haasteita saada yhteys uusiin asiakasryhmiin | ◯ | ◯ | ◯ | ◯ | ◯ |
| Haasteita luoda trafiikkia (nettisivuilla) ja liidejä | ◯ | ◯ | ◯ | ◯ | ◯ |
| Haasteita luoda sisältöä kansainväliselle yleisölle | ◯ | ◯ | ◯ | ◯ | ◯ |
| Haasteet todentaa sijoitetun pääoman tuotto (ROI) markkinoinnissa | ◯ | ◯ | ◯ | ◯ | ◯ |

**11.** Kuinka hyvin yrityksenne on mielestäsi onnistunut suoriutumaan edellä mainituista haasteista?

| | Erittäin hyvin | Melko hyvin | En osaa sanoa | Heikosti | Erittäin heikosti |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Uusien asiakasryhmien kontaktointi | ○ | ○ | ○ | ○ | ○ |
| Trafiikki ja liidit | ○ | ○ | ○ | ○ | ○ |
| Sisällöntuotanto kansainväliselle yleisölle | ○ | ○ | ○ | ○ | ○ |
| Sijoitetun pääoman (ROI) todentaminen markkinoinnissa | ○ | ○ | ○ | ○ | ○ |

**12.** Tähän voit kirjoittaa lyhyesti millaisia muunlaisia haasteita yrityksenne on kohdannut markkinoinnissa?

_____

_____

_____

**13.** Sukupuoli

○ Mies
○ Nainen

**14.** Ikäsi

○ 20-29
○ 30-39
○ 40-49
○ 50-59
○ 60+

**15.** Tähän voit kirjoittaa muita virtuaalitodellisuutta koskevia ajatuksia

_____

_____

_____

**16.** Tähän voit laittaa yhteystietosi lahjakorttiarvontaa varten

Etunimi _____

Sukunimi _____

sähköposti _____

Osoite _____

Postinumero _____

Kaupunki _____

**Appendix 4. The survey (English)**

Virtual reality

**1.** How familiar are you with a concept virtual reality?

◯ I'm completely unfamiliar with concept

◯ I've heard about the concepts, but don't understand the big picture

◯ I'm familiar with the concepts but haven't tried it

◯ I'm familiar with the concepts and used them occasionally / frequently

**2.** How interested is your organisation about virtual reality?

◯ Not interested

◯ Interested but cannot fathom virtual reality bringing any additional value for our organization

- ◯ Interested and can see virtual reality bringing additional value in our organization
- ◯ Our organization is currently using virtual reality

**3.** How long does it usually take for your organization to use new technologies?

- ◯ Our organization usually stays away from any new technologies
- ◯ Our organization is usually one of the last to adopt new technologies
- ◯ Our organization is eager to benefit from new technologies but does not wish to be among the first to try them
- ◯ Our organization is usually ready to take a risk to get strategic leverage over the new technology

**4.** Do you agree? ”Virtual reality helps people in everyday lives in near future”

- ◯ Strongly agree
- ◯ Agree
- ◯ Not agreeing or disagreeing
- ◯ Disagree
- ◯ Strongly disagree

**5.** Which of following types describes your organization best?

- ◯ Our organization is among the first in acquiring the new innovations and technologies
- ◯ Our organization wants to use the newest technology, but only after references.
- ◯ Our organization is happy with current technology and moves to next after it becomes affordable, reliable and proven
- ◯ Not interested in new technologies and prefer to keep the older one as long as possible

**6.** Does virtual reality support the brand of your company?

- ◯ Strongly agree
- ◯ Agree
- ◯ Not agreeing nor disagreeing
- ◯ Disagree

○ Strongly disagree

**7.** Do you agree? ”Virtual reality is a gateway to access new opportunities in marketing?”

○ Strongly agree
○ Agree
○ Not agreeing nor disagreeing
○ Disagree
○ Strongly disagree

**8.** Do you agree? ”Virtual reality poses more threats rather than creates opportunities?”

○ Strongly agree
○ Agree
○ Not agreeing or disagreeing
○ Disagree
○ Strongly disagree

**9.** If you answered **strongly agree** or **agree,** could you explain why shortly?

_____

_____

_____

**10.** What level of challenges your organization is facing in following marketing efforts?

| | No challenges | A bit challenging | Cannot tell | Challenging | Very challenging |
|---|---|---|---|---|---|
| Challenges to contact new segments | ☐ | ☐ | ☐ | ☐ | ☐ |
| Challenges in generating traffic and leads | ☐ | ☐ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| Challenges to target content for international audience | ☐ | ☐ | ☐ | ☐ | ☐ |
| Challenges to prove return on investment (ROI) of marketing activities | ☐ | ☐ | ☐ | ☐ | ☐ |

**11.** How well your organization's marketing efforts have succeeded to overcome the mentioned challenges?

| | Very well | Quite well | Cannot tell | Poorly | Very poorly |
|---|---|---|---|---|---|
| New segments | ○ | ○ | ○ | ○ | ○ |
| Traffic and leads | ○ | ○ | ○ | ○ | ○ |
| Content for international audience | ○ | ○ | ○ | ○ | ○ |
| Return on investments (ROI) | ○ | ○ | ○ | ○ | ○ |

**12.** You can write here other challenges your organization has been facing in marketing.

_____

_____

_____

**13.** Gender

○ Male

○ Female

**14.** Age

○ 20-29
○ 30-39
○ 40-49
○ 50-59
○ 60+

**15.** You can write here anything else you wish say regarding virtual reality.

_____

_____

_____

**Appendix 5. Open comments**

**Jos vastasit vahvasti samaa mieltä TAI jokseenkin samaa mieltä, voisitko selittää lyhyesti miksi?**

- En näe mitään uhkia virtuaalitodellisuudessa.
- VR tulee olemaan internetin jälkeen seuraava iso kehitysaskel teknologian hyödyntämisessä ihmisten arjessa.
- Höpöhöpö jargoniaa. Mikä on todellista? Minä? Sinä? Tämä luuri? Kaikki turhakesanasto kuullostaa niin naivilta,sori.

**Tähän voit kirjoittaa lyhyesti millaisia muunlaisia haasteita yrityksenne on kohdannut markkinoinnissa?**

- Kanavat
- Markkinoinnin täsmäosaamista omalla alalla voisi lisätä, jotta pieni markkinointibudjetti voidaan käyttää mahdollisimman tehokkaasti
- Kaikki tarjottava markkinointi on laadutonta, parasta in in-house ammattilainen - joka vielä pysyy teknologian aallonharjalla ja motivoituneena.
- Markkinointimme on erittäin kohdennettua, emme harrasta ns. massamarkkinointia.

- Markkinoinnin tavoitteet vaihtelevat ja tähtäävät usein pitkälle aikavälille, jolloin pääoman käytön todentaminen on haastavaa.
- Olemme vielä nuori yritys, joka etsii vielä identiteettiään niin tuotteen kuin markkinoinnin osalta. Lisäksi markkina on vielä nuori ja kasvaa, joten työ on vielä kesken.
- Markkinoinnin tehokas suuntaaminen oikealle kohderyhmälle on edelleen suhteellisen haastavaa, vaikka sosiaalinen media parantanut tilannetta huomattavasti
- Motivaationpuute. Nämä ovat täysin triviaaleja kysymyksiä. Menkää pysättämään tehokalastus tai yrittäkää kieltää muovin turha käyttö.
- Markkinointi siirtymässä someen

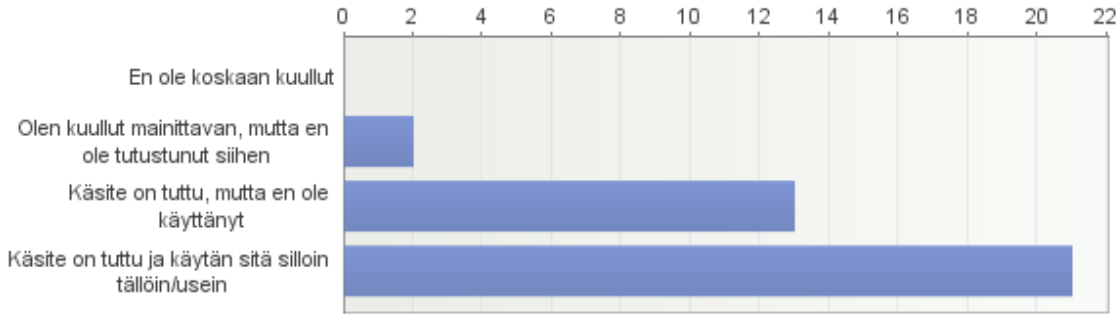
**Tähän voit kirjoittaa muita virtuaalitodellisuutta koskevia ajatuksia**

- Erittäin hyvät mahdollisuudet.
- Se tulee kun on tullakseen, ei mullista omaa elämääni
- Itse uskon VR:n mahdollisuuksiin, mutta laadukas tuotanto on tällä hetkellä vielä liian kallista monipuoliseen käyttöön.
- AR tulee olemaan todennäköisesti suurempi juttu kuin virtuaalitodellisuus.
- Lähimpänä tätä KÄYTÄNNÖSSÄ on meidän yrityksen google my business sivuilla "walk in mahdollisuus"
- Virtuaaliepätodellisuus.

**Appendix 6. Survey results. Finnish**

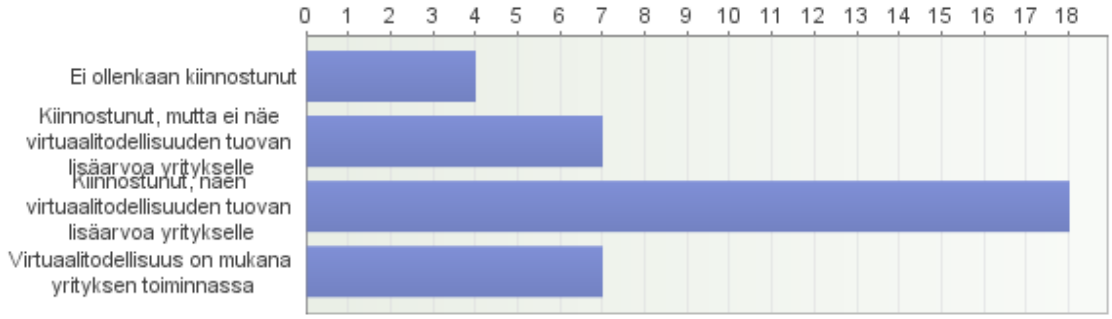
1. Kuinka tuttu on käsite virtuaalitodellisuus?

Number of respondents: 36



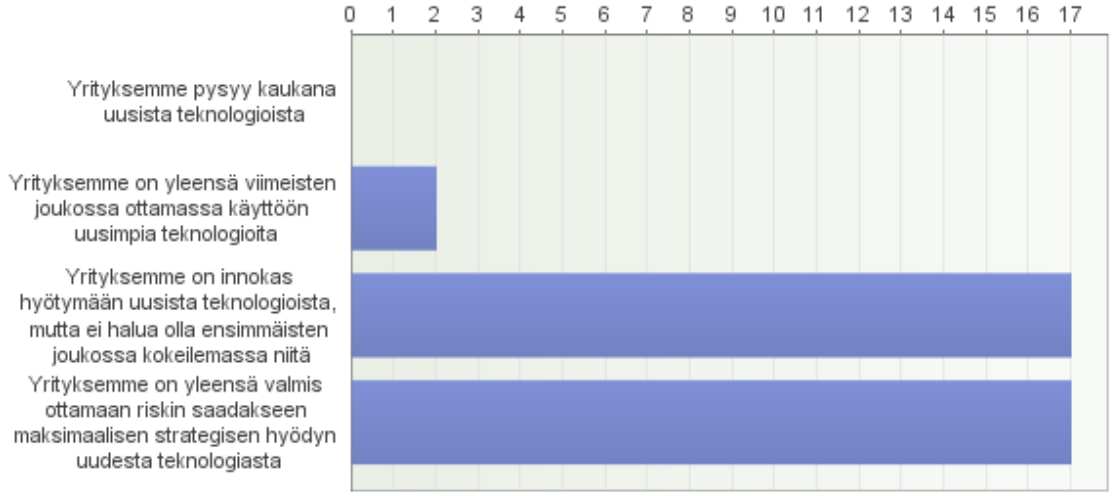
2. Kuinka kiinnostunut yrityksenne on virtuaalitodellisuudesta?

Number of respondents: 36



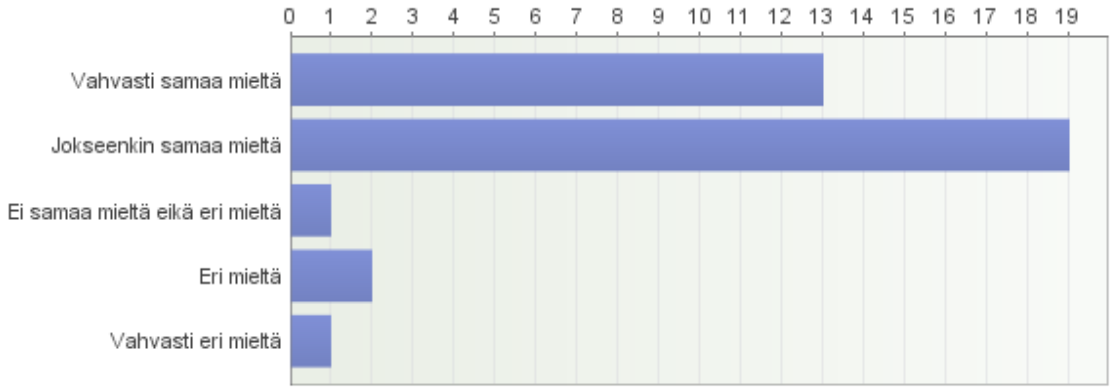

3. Kauanko yrityksellä yleensä kestää ottaa käyttöön uusi teknologia?

Number of respondents: 36



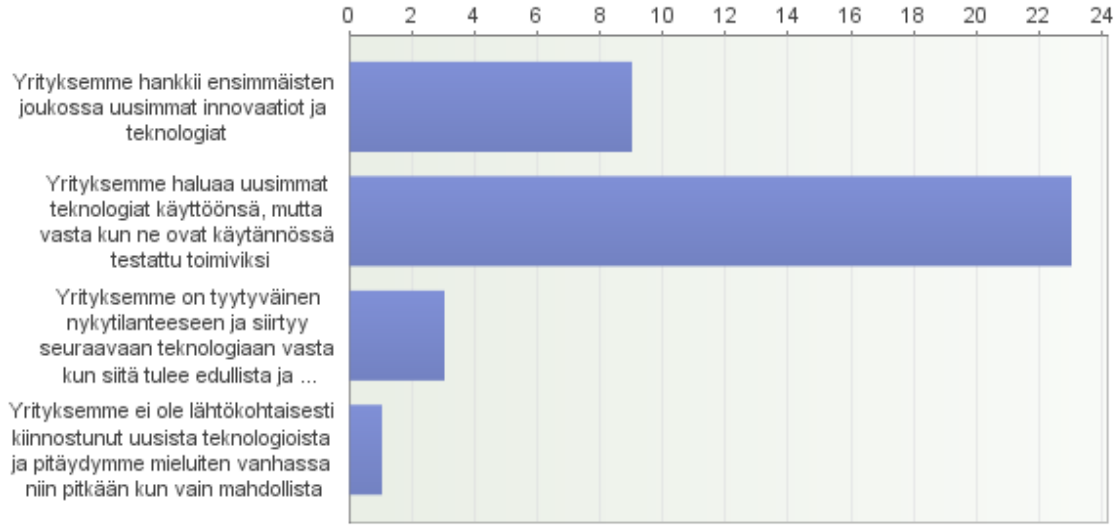

4. Kuinka suhtaudut väitteeseen: ”Virtuaalitodellisuus auttaa ihmisiä arjessa lähitulevaisuudessa”?

Number of respondents: 36



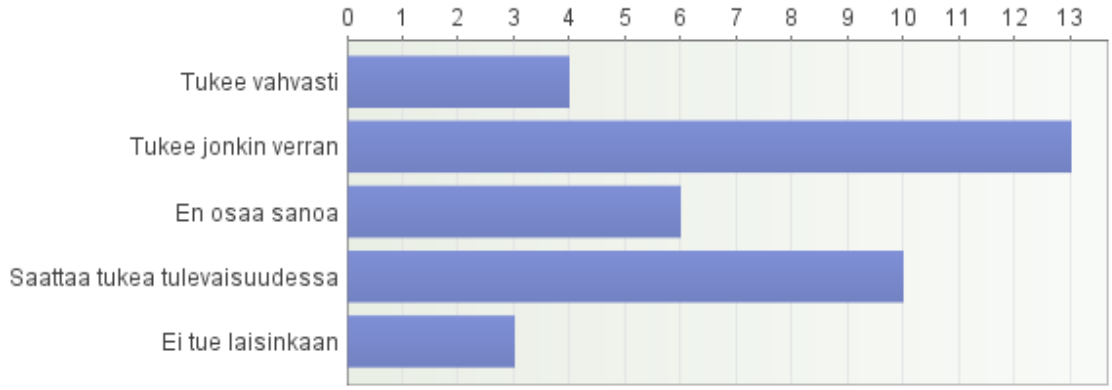

5. Mikä seuraavista kuvaa yritystänne parhaiten?

Number of respondents: 36



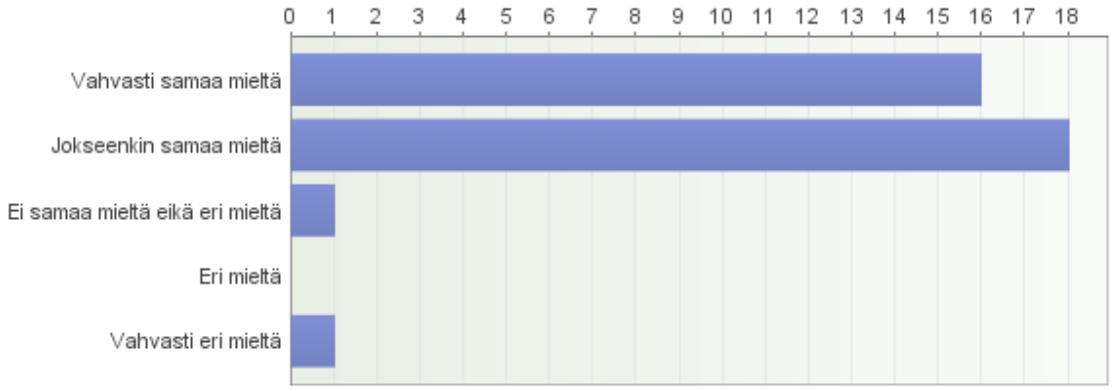

6. Tukeeko virtuaalitodellisuus yrityksenne brändiä?

Number of respondents: 36



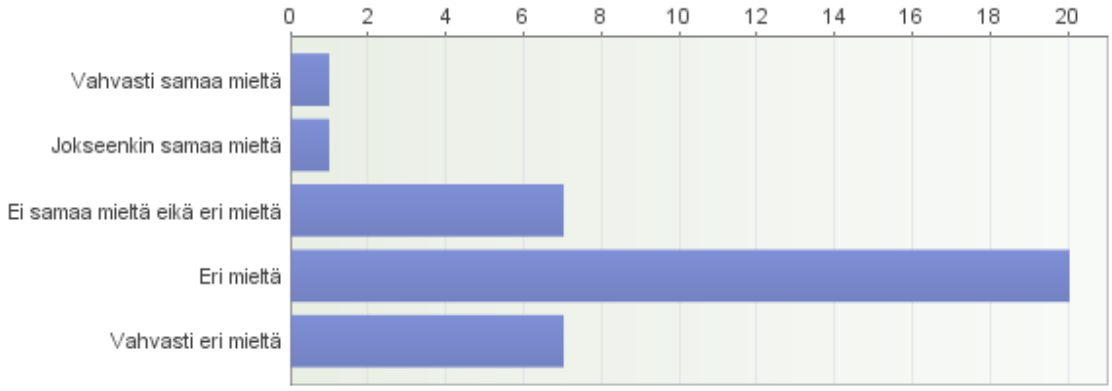
7. Kuinka suhtaudut väitteeseen: ”Virtuaalitodellisuus avaa uusia mahdollisuuksia markkinoinnissa”

Number of respondents: 36




8. Kuinka suhtaudut väitteeseen: "Virtuaalitodellisuus synnyttää enemmän uhkia kuin mahdollisuuksia?”

Number of respondents: 36




9. Jos vastasit vahvasti samaa mieltä TAI jokseenkin samaa mieltä, voisitko selittää lyhyesti miksi?

Number of respondents: 3

- En näe mitään uhkia virtuaalitodellisuudessa.
- VR tulee olemaan internetin jälkeen seuraava iso kehitysaskel teknologian hyödyntämisessä ihmisten arjessa
- Höpöhöpö jargoniaa. Mikä on todellista? Minä? Sinä? Tämä luuri? Kaikki turhakesanasto kuullostaa niin naivilta,sori.

10. Voisitko kuvailla onko yrityksenne kohdannut seuraavanlaisia haasteita markkinoinnissa ja jos on, niin millä tasolla?

Number of respondents: 36

| | Ei haasteita | Hieman haastavaa | En osaa sanoa | Haastavaa | Erittäin haastavaa | Total | Average |
|---|---|---|---|---|---|---|---|
| Haasteita saada yhteys uusiin asiakasryhmiin | 5 | 14 | 3 | 13 | 1 | 36 | 2.75 |
| Haasteita luoda trafiikkia (nettisivuilla) ja liidejä | 3 | 13 | 7 | 10 | 3 | 36 | 2.92 |
| Haasteita luoda sisältöä kansainväliselle yleisölle | 5 | 7 | 13 | 9 | 2 | 36 | 2.89 |
| Haasteet todentaa sijoitetun pääoman tuotto (ROI) markkinoinnissa | 4 | 11 | 10 | 8 | 3 | 36 | 2.86 |
| **Total** | **17** | **45** | **33** | **40** | **9** | **144** | **2.85** |

11. Kuinka hyvin yrityksenne on mielestäsi onnistunut suoriutumaan edellä mainituista haasteista?

Number of respondents: 36

| | Erittäin hyvin | Melko hyvin | En osaa sanoa | Heikosti | Erittäin heikosti | Total | Average |
|---|---|---|---|---|---|---|---|
| Uusien asiakasryhmien kontaktointi | 4 | 21 | 3 | 8 | 0 | 36 | 2.42 |
| Trafiikki ja liidit | 5 | 17 | 4 | 9 | 1 | 36 | 2.56 |
| Sisällöntuotanto kansainväliselle yleisölle | 3 | 6 | 16 | 9 | 2 | 36 | 3.03 |
| Sijoitetun pääoman (ROI) todentaminen markkinoinnissa | 3 | 10 | 13 | 8 | 2 | 36 | 2.89 |
| **Total** | **15** | **54** | **36** | **34** | **5** | **144** | **2.72** |

12. Tähän voit kirjoittaa lyhyesti millaisia muunlaisia haasteita yrityksenne on kohdannut markkinoinnissa?

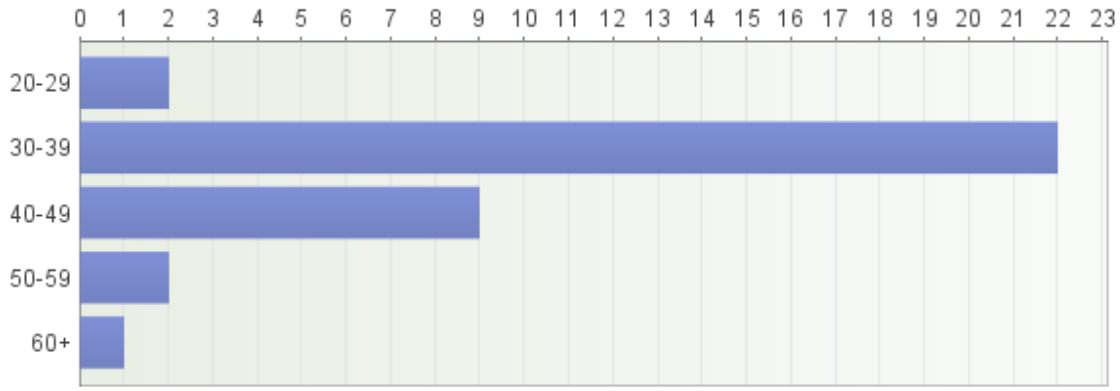
Number of respondents: 9

- Kanavat

- Markkinoinnin täsmäosaamista omalla alalla voisi lisätä, jotta pieni markkinointibudjetti voidaan käyttää mahdollisimman tehokkaasti
- Kaikki tarjottava markkinointi on laadutonta, parasta in in-house ammattilainen - joka vielä pysyy teknologian aallonharjalla ja motivoituneena.
- Markkinointimme on erittäin kohdennettua, emme harrasta ns. massamarkkinointia.
- Markkinoinnin tavoitteet vaihtelevat ja tähtäävät usein pitkälle aikavälille, jolloin pääoman käytön todentaminen on haastavaa.
- Olemme vielä nuori yritys, joka etsii vielä identiteettiään niin tuotteen kuin markkinoinnin osalta. Lisäksi markkina on vielä nuori ja kasvaa, joten työ on vielä kesken.
- Markkinoinnin tehokas suuntaaminen oikealle kohderyhmälle on edelleen suhteellisen haastavaa, vaikka sosiaalinen media parantanut tilannetta huomattavasti
- Motivaationpuute. Nämä ovat täysin triviaaleja kysymyksiä. Menkää pysättämään tehokalastus tai yrittäkää kieltää muovin turha käyttö.
- Markkinointi siirtymässä someen

13. Sukupuoli

Number of respondents: 35




15. Tähän voit kirjoittaa muita virtuaalitodellisuutta koskevia ajatuksia

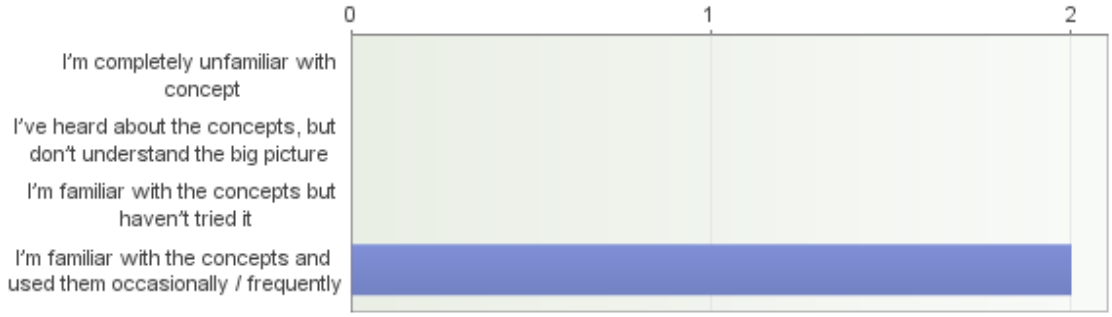
Number of respondents: 6

- Erittäin hyvät mahdollisuudet.
- Se tulee kun on tullakseen, ei mullista omaa elämääni
- Itse uskon VR:n mahdollisuuksiin, mutta laadukas tuotanto on tällä hetkellä vielä liian kallista monipuoliseen käyttöön.
- AR tulee olemaan todennäköisesti suurempi juttu kuin virtuaalitodellisuus.
- Lähimpänä tätä KÄYTÄNNÖSSÄ on meidän yrityksen google my business sivuilla "walk in mahdollisuus"
- Virtuaaliepätodellisuus.

**Appendix 7. Survey results. English**

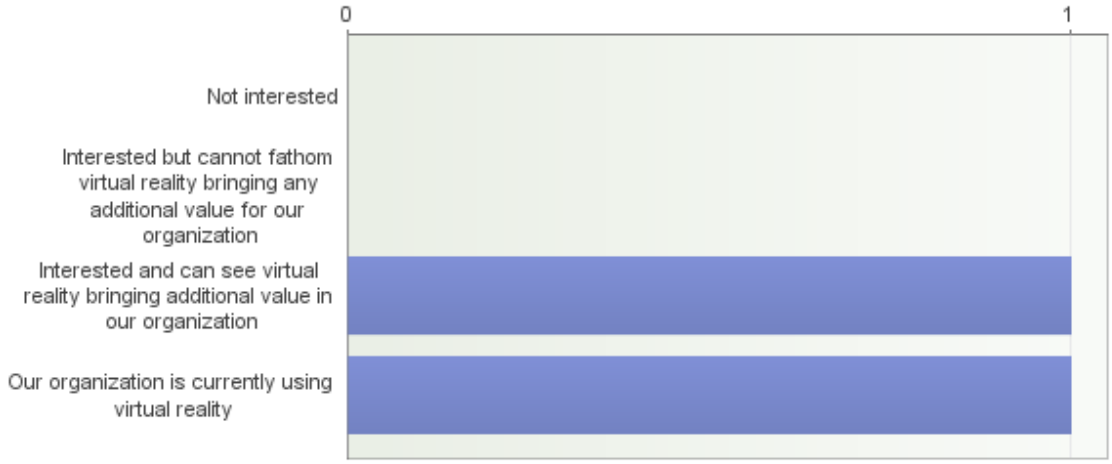
1. How familiar are you with a concept virtual reality?

Number of respondents: 2



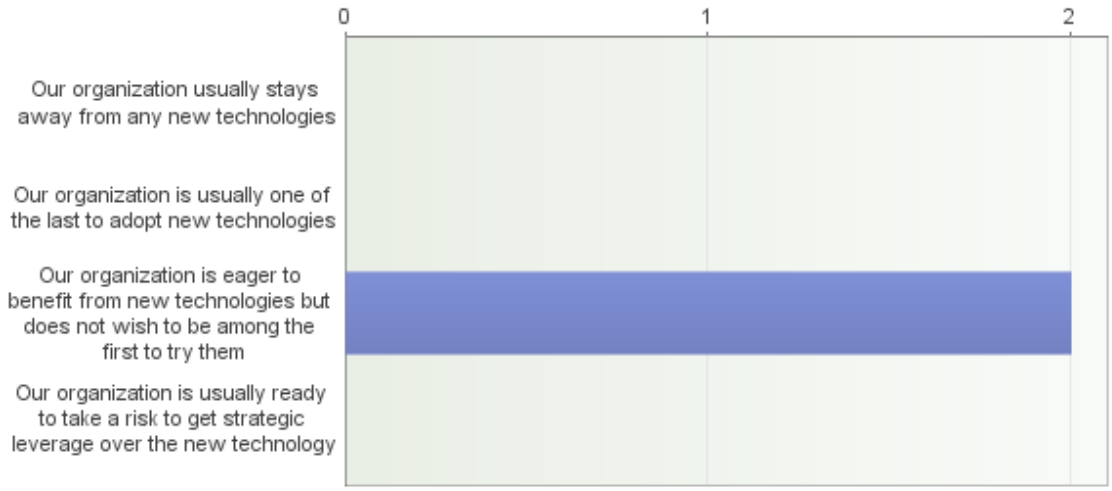

2. How interested is your organisation about virtual reality?

Number of respondents: 2



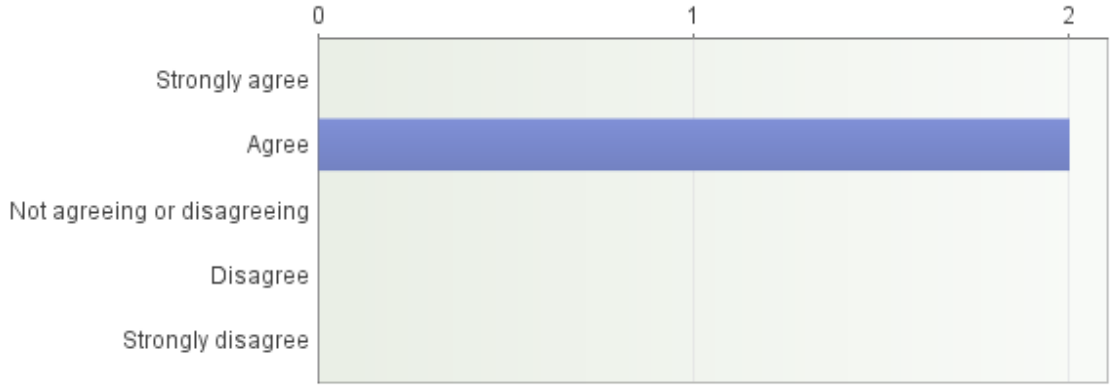

3. How long does it usually take for your organization to use new technologies?

Number of respondents: 2



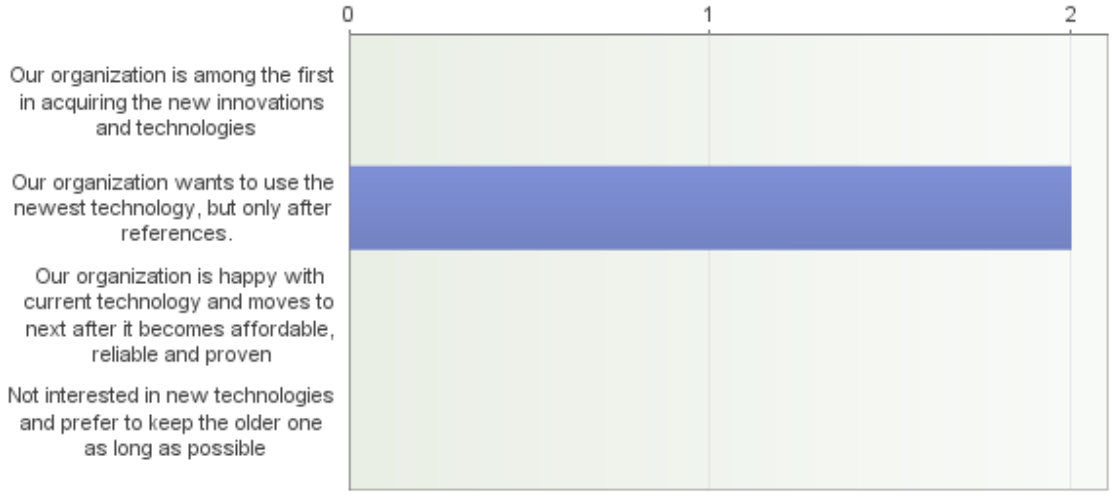

4. Do you agree? ”Virtual reality helps people in everyday lives in near future”

Number of respondents: 2



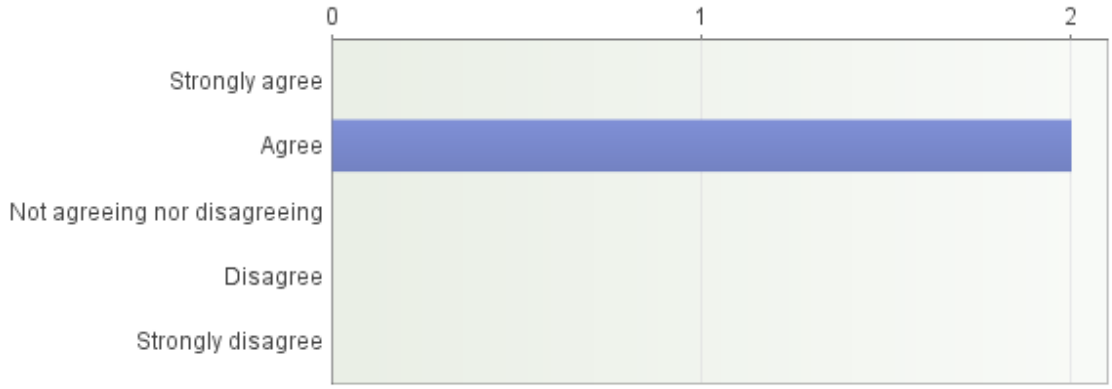

5. Which of following types describes your organization best?

Number of respondents: 2



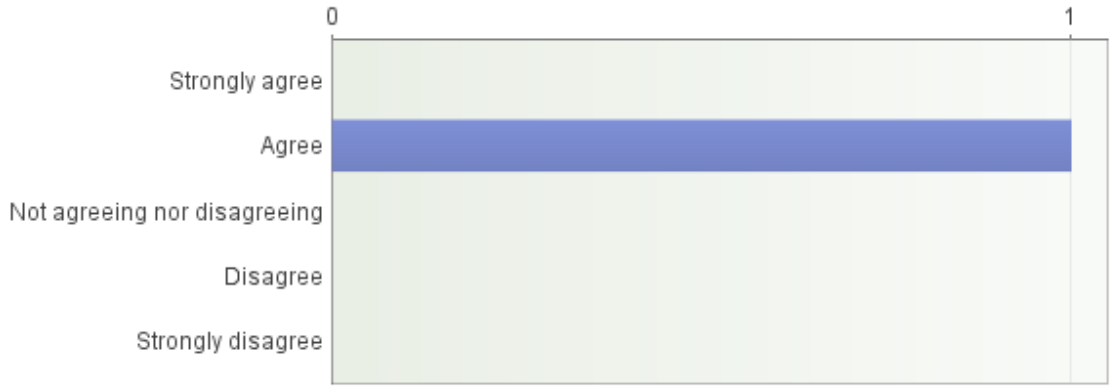
6. Does virtual reality support the brand of your company?

Number of respondents: 2



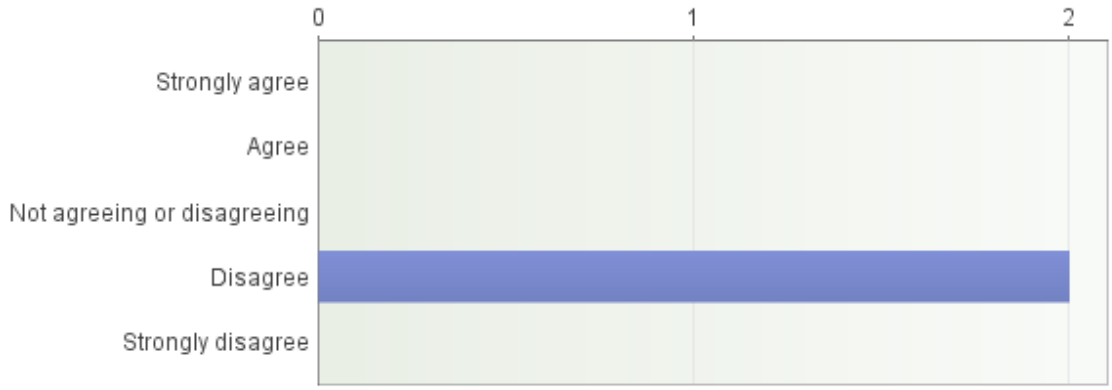

7. Do you agree? ”Virtual reality is a gateway to access new opportunities in marketing?”

Number of respondents: 1




8. Do you agree? ”Virtual reality poses more threats rather than creates opportunities?”

Number of respondents: 2




9. If you answered strongly agree or agree, could you explain why shortly?

Number of respondents: 1

- -

10. What level of challenges your organization is facing in following marketing efforts?

Number of respondents: 2

| | No challenges | A bit challenging | Cannot tell | Challenging | Very challenging | Total | Average |
|---|---|---|---|---|---|---|---|
| Challenges to contact new segments | 0 | 1 | 1 | 0 | 0 | 2 | 2.5 |
| Challenges in generating traffic and leads | 0 | 1 | 1 | 0 | 0 | 2 | 2.5 |
| Challenges to target content for international audience | 0 | 0 | 2 | 0 | 0 | 2 | 3 |
| Challenges to prove return on investment (ROI) of marketing activities | 0 | 1 | 1 | 0 | 0 | 2 | 2.5 |
| **Total** | **0** | **3** | **5** | **0** | **0** | **8** | **2.63** |

11. How well your organization's marketing efforts have succeeded to overcome the mentioned challenges?

Number of respondents: 2

| | Very well | Quite well | Cannot tell | Poorly | Very poorly | Total | Average |
|---|---|---|---|---|---|---|---|
| New segments | 0 | 1 | 1 | 0 | 0 | 2 | 2.5 |
| Traffic and leads | 0 | 1 | 1 | 0 | 0 | 2 | 2.5 |
| Content for international audience | 0 | 0 | 2 | 0 | 0 | 2 | 3 |
| Return on investments (ROI) | 1 | 0 | 1 | 0 | 0 | 2 | 2 |
| **Total** | | | | | | | |

12. You can write here other challenges your organization has been facing in marketing.

No answers.

13. Gender

Number of respondents: 2


14. Age

Number of respondents: 2


15. You can write here anything else you wish say regarding virtual reality.

No answers.